

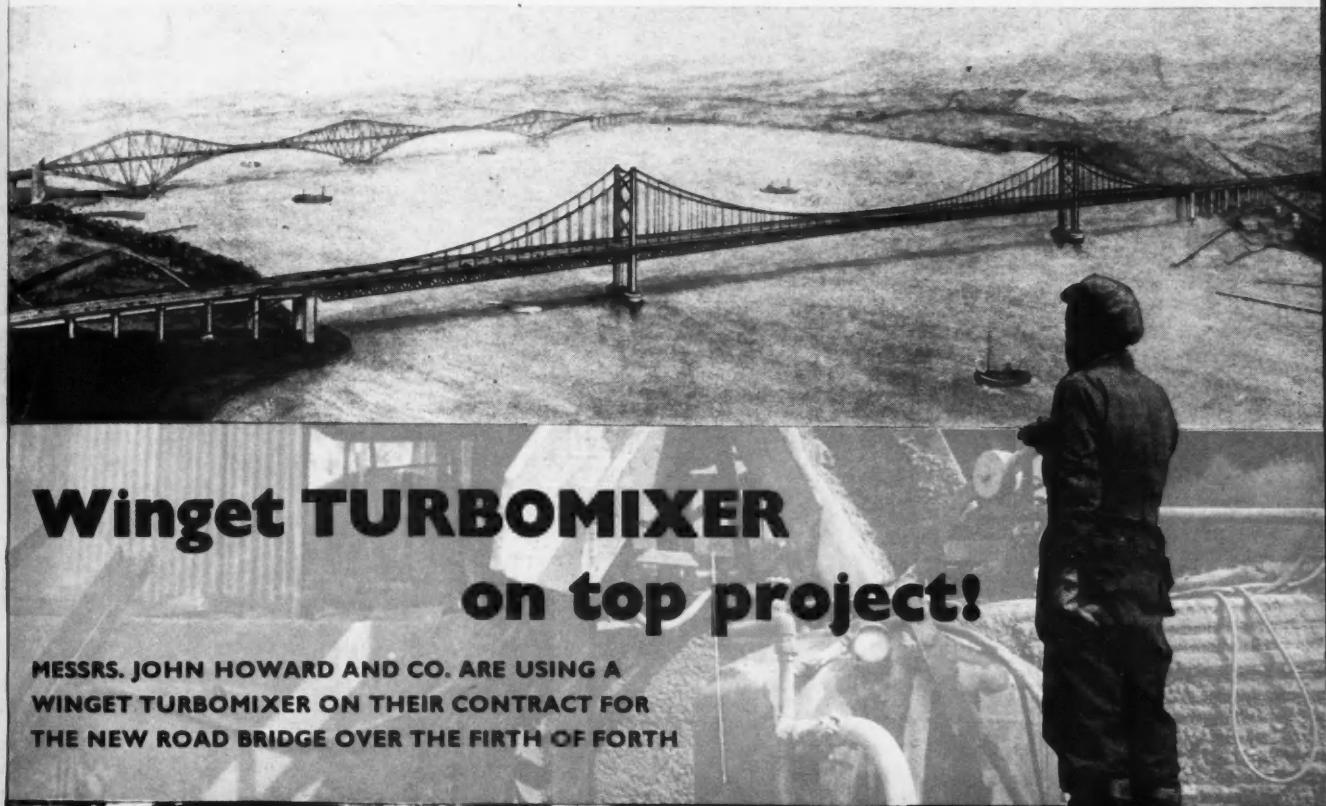
THE  
**CONTRACT JOURNAL**  
INCORPORATING

THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

No. 4,230 82nd YEAR

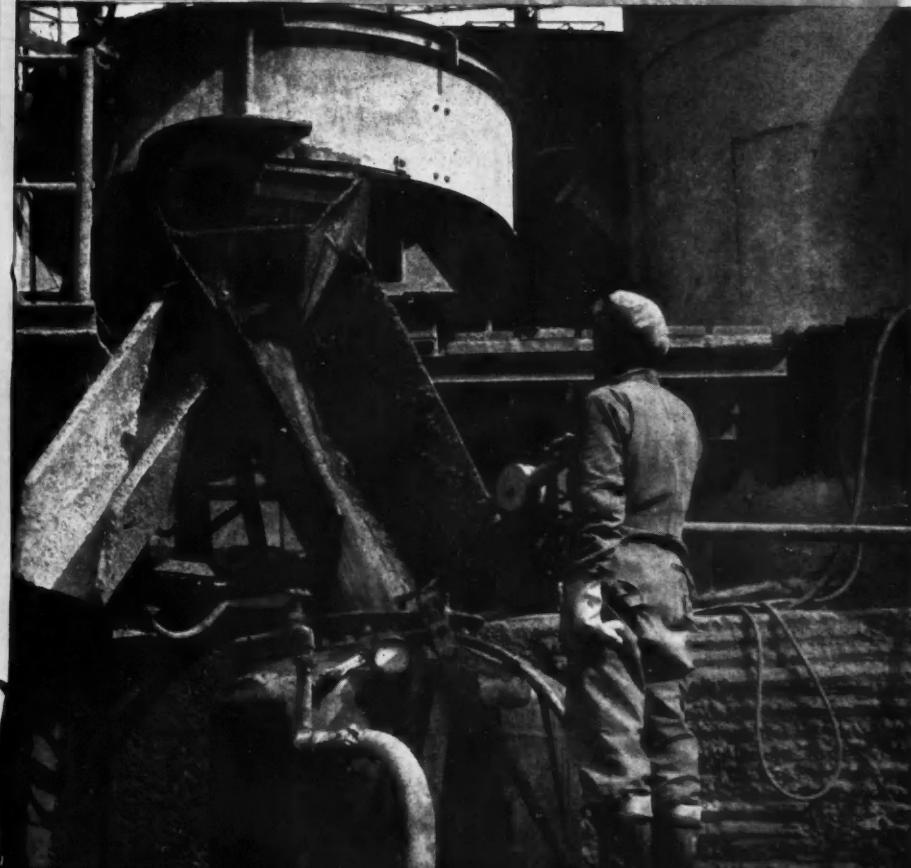
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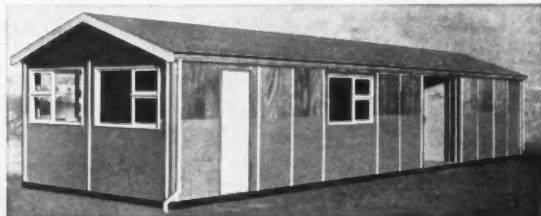
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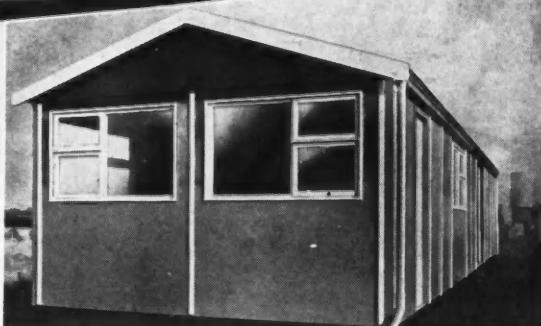


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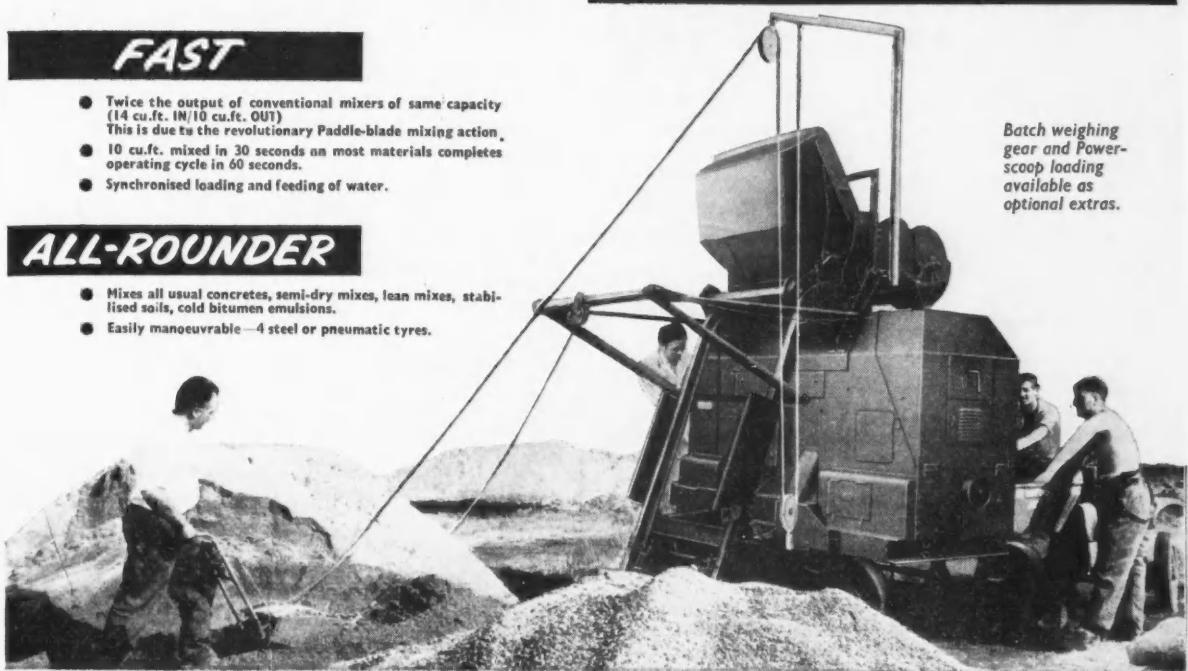
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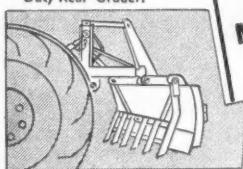
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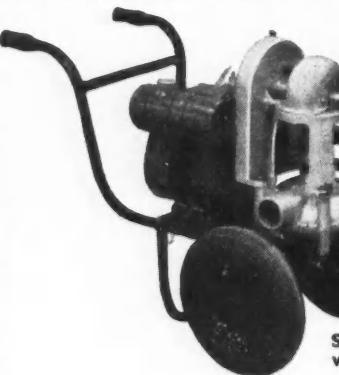
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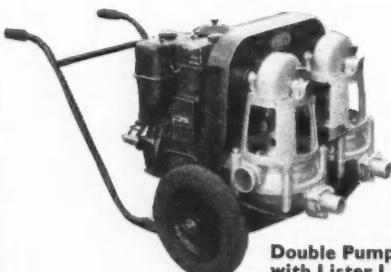
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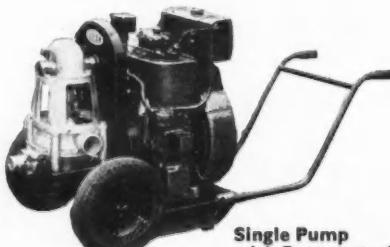
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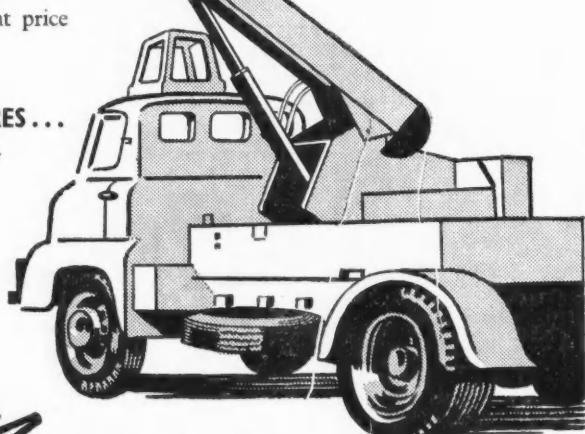
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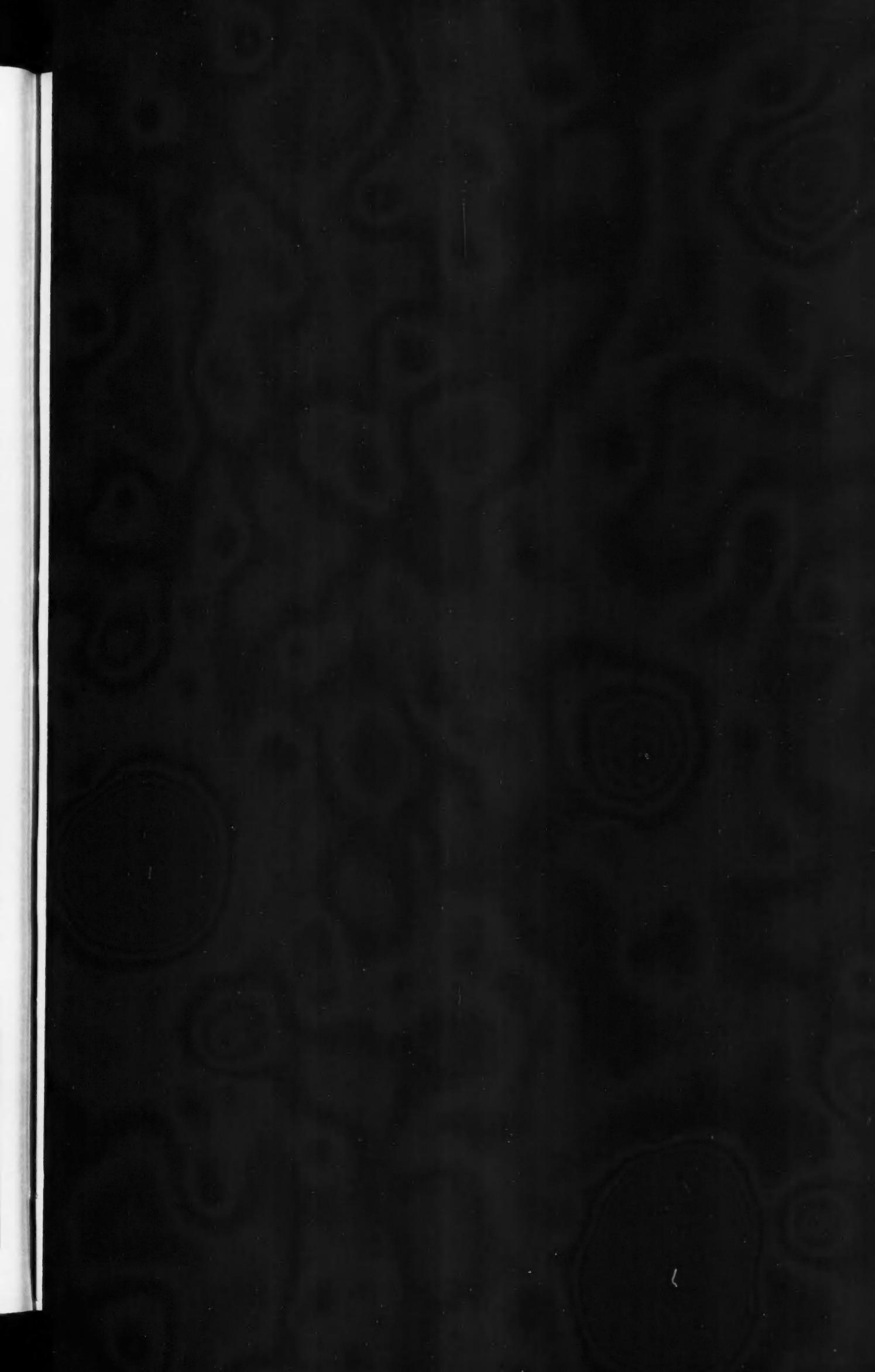
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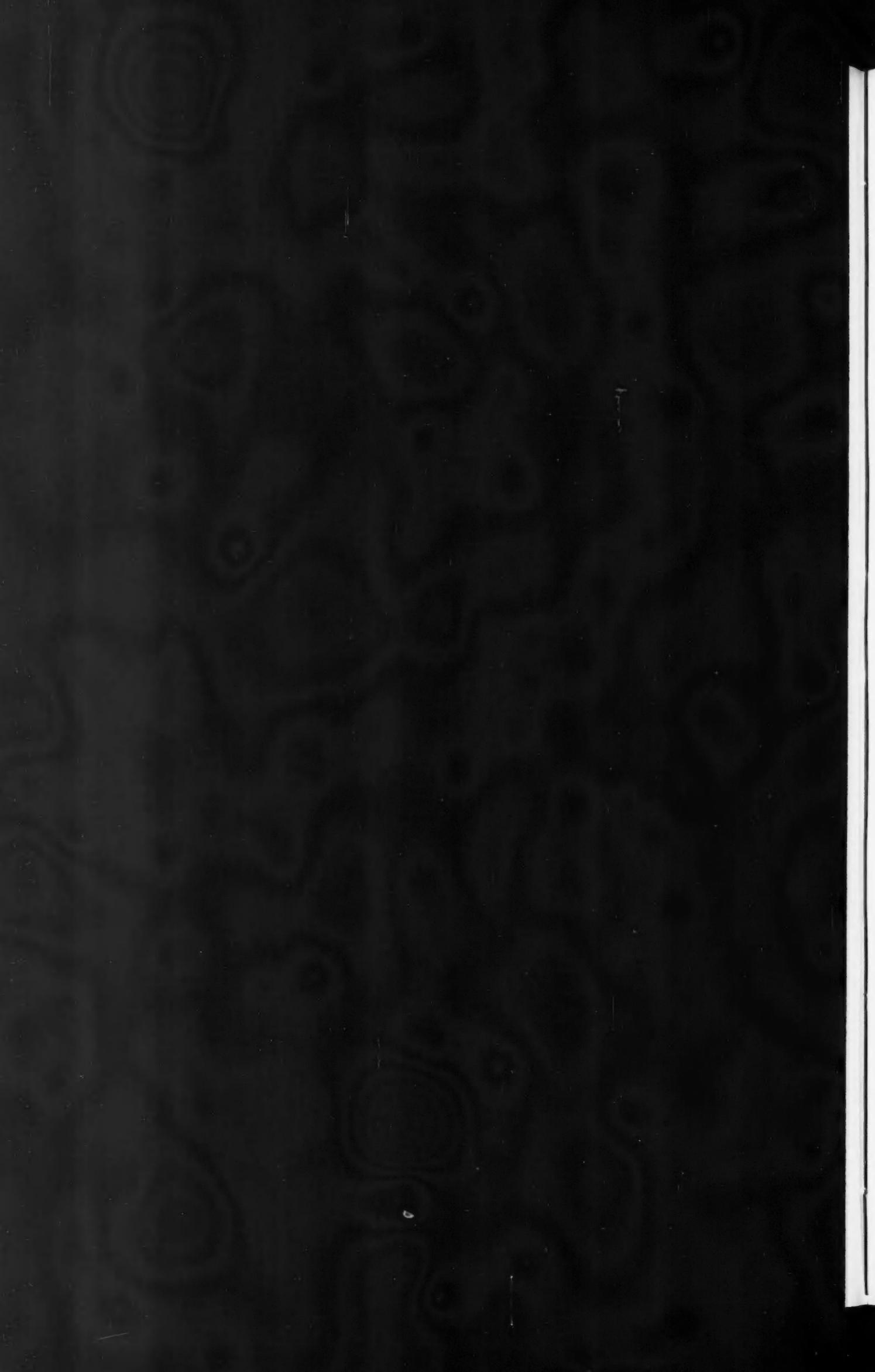
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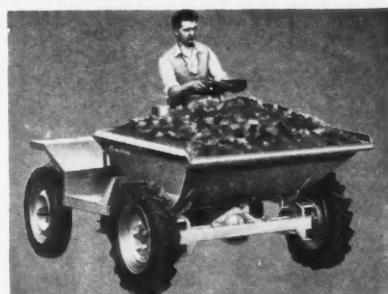
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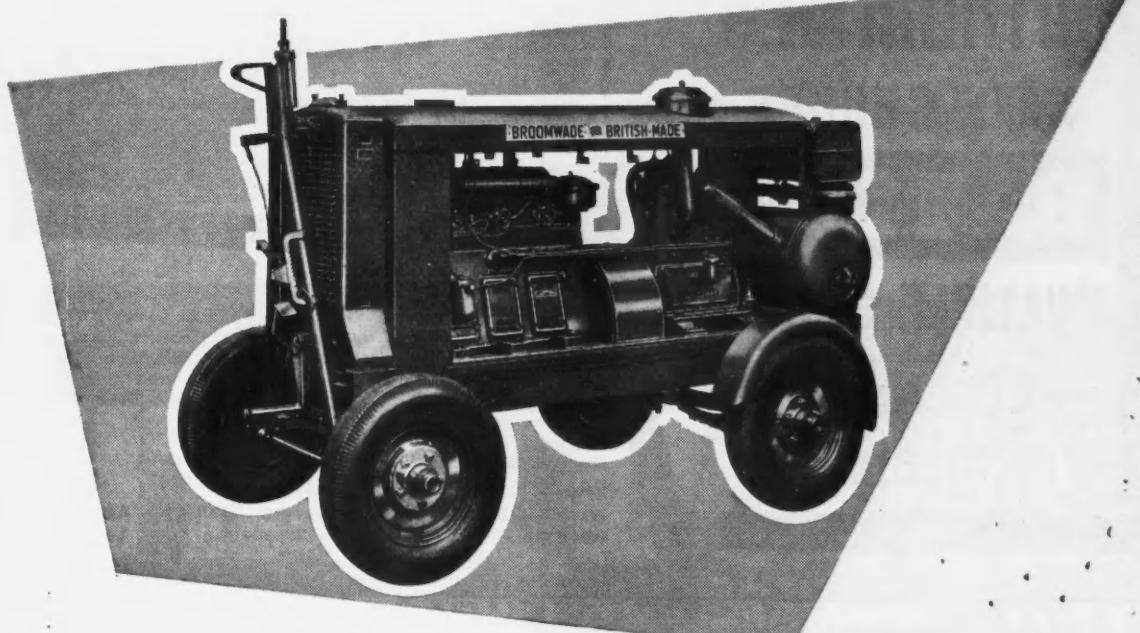
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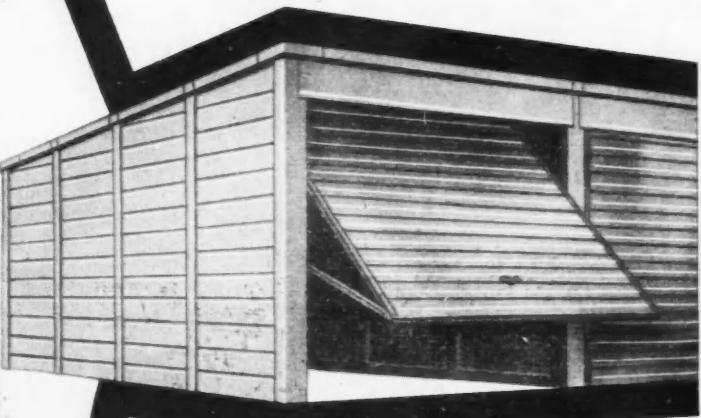
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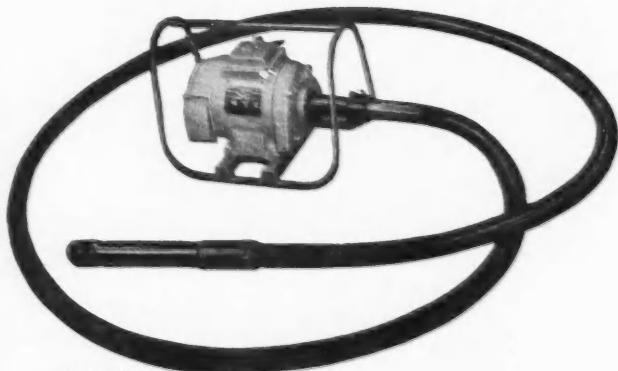
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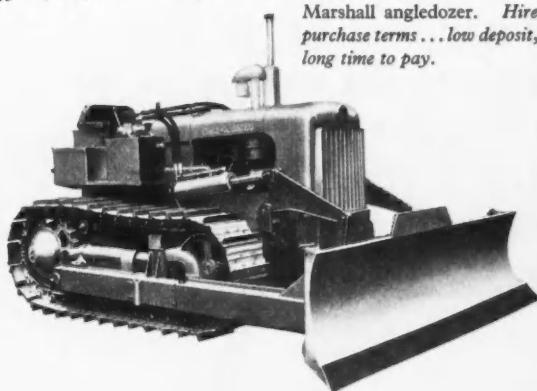
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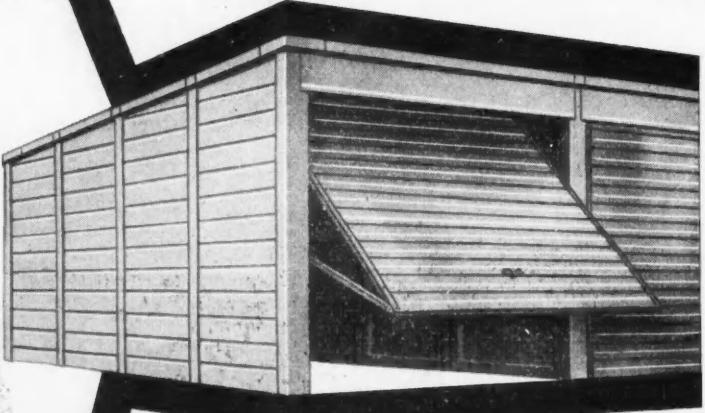
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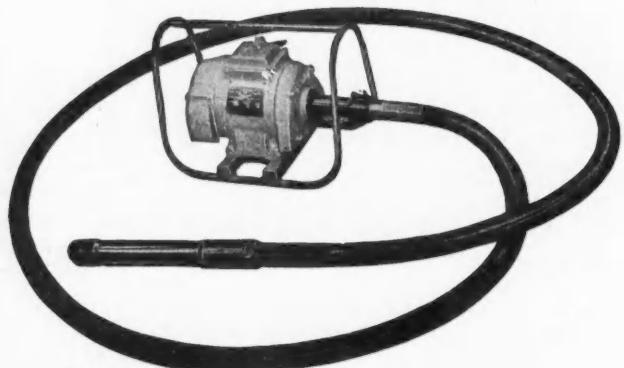
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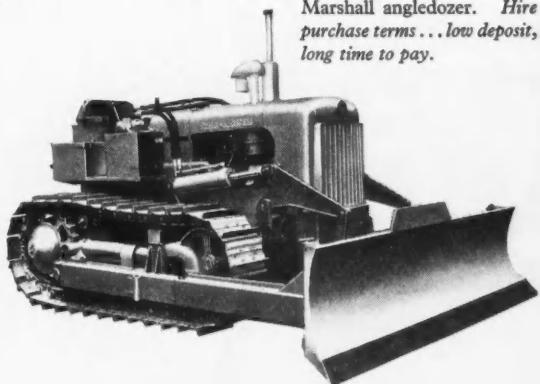
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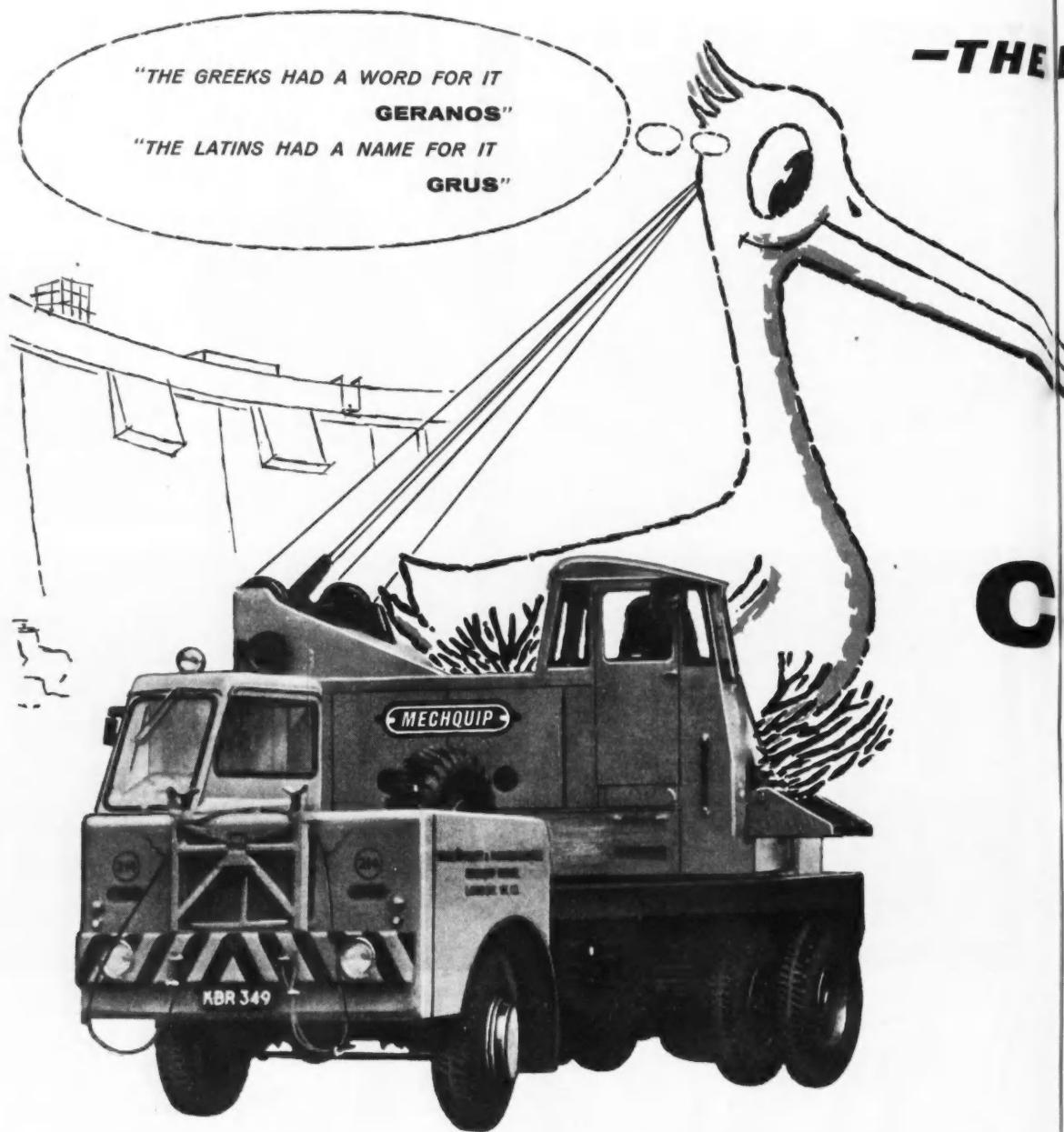
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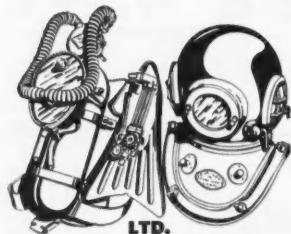
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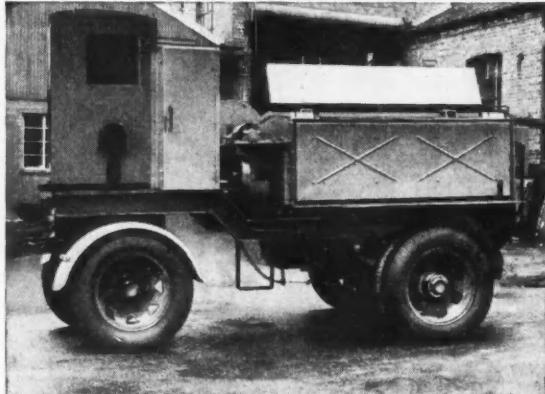
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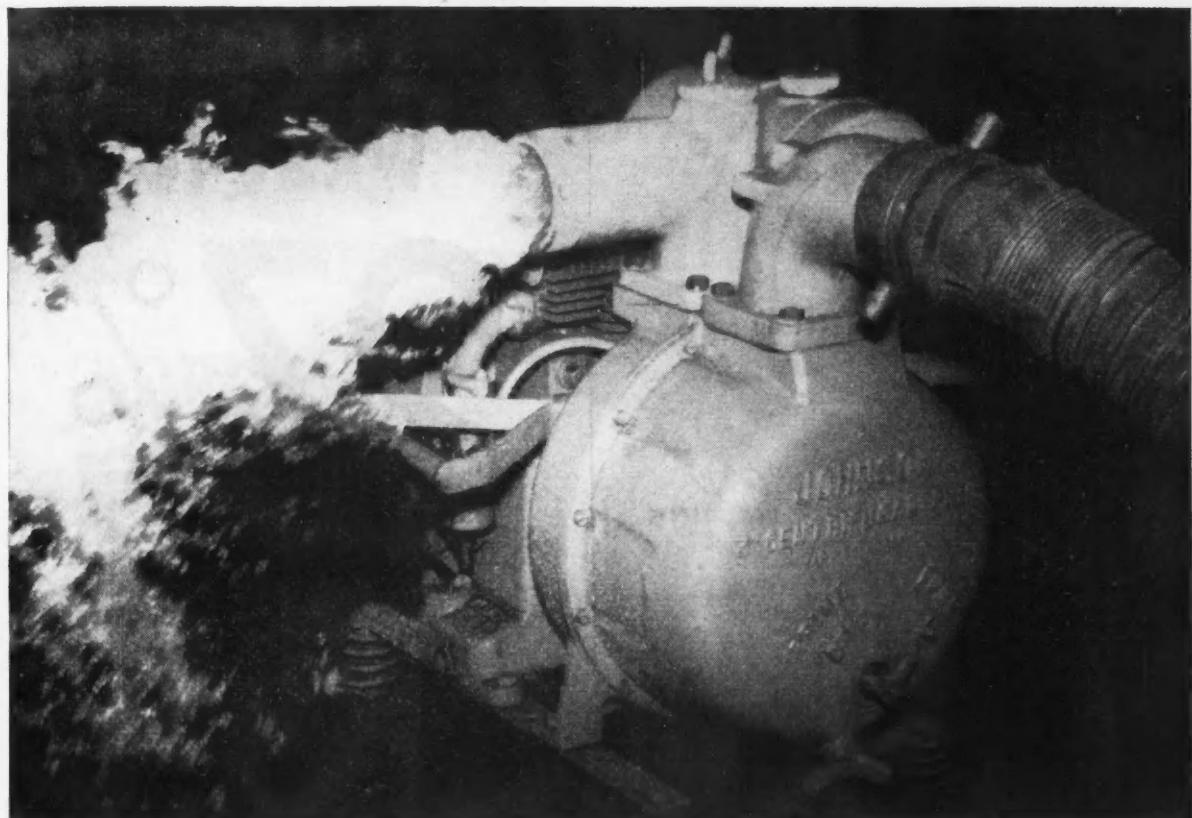
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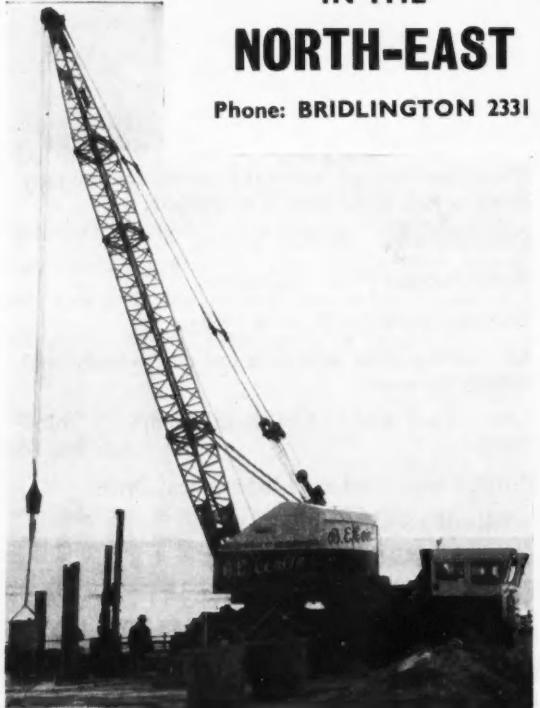
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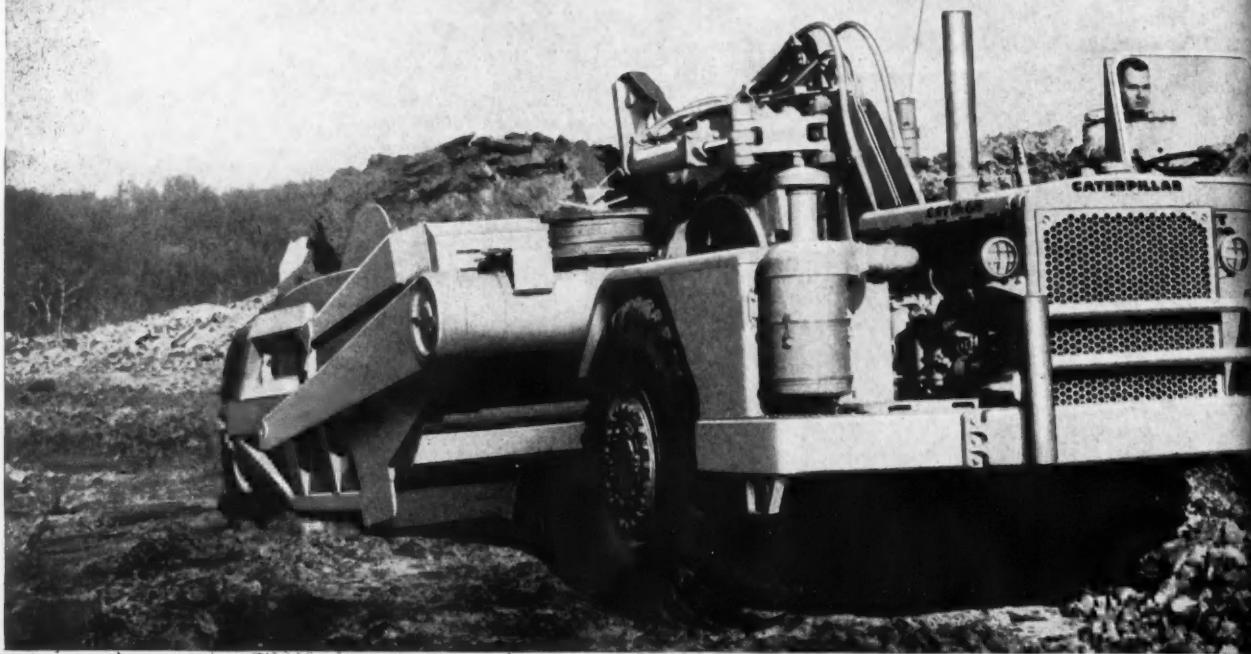
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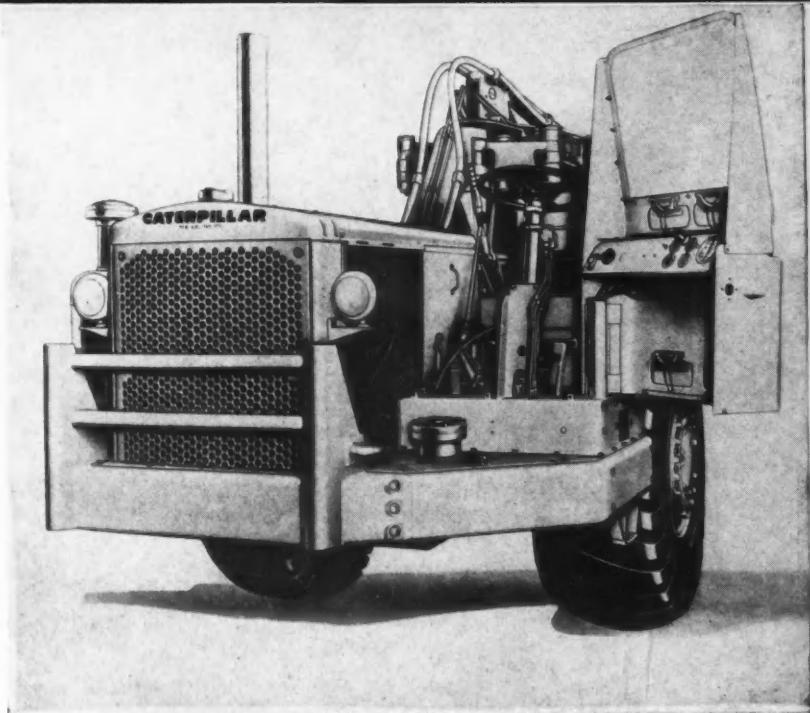


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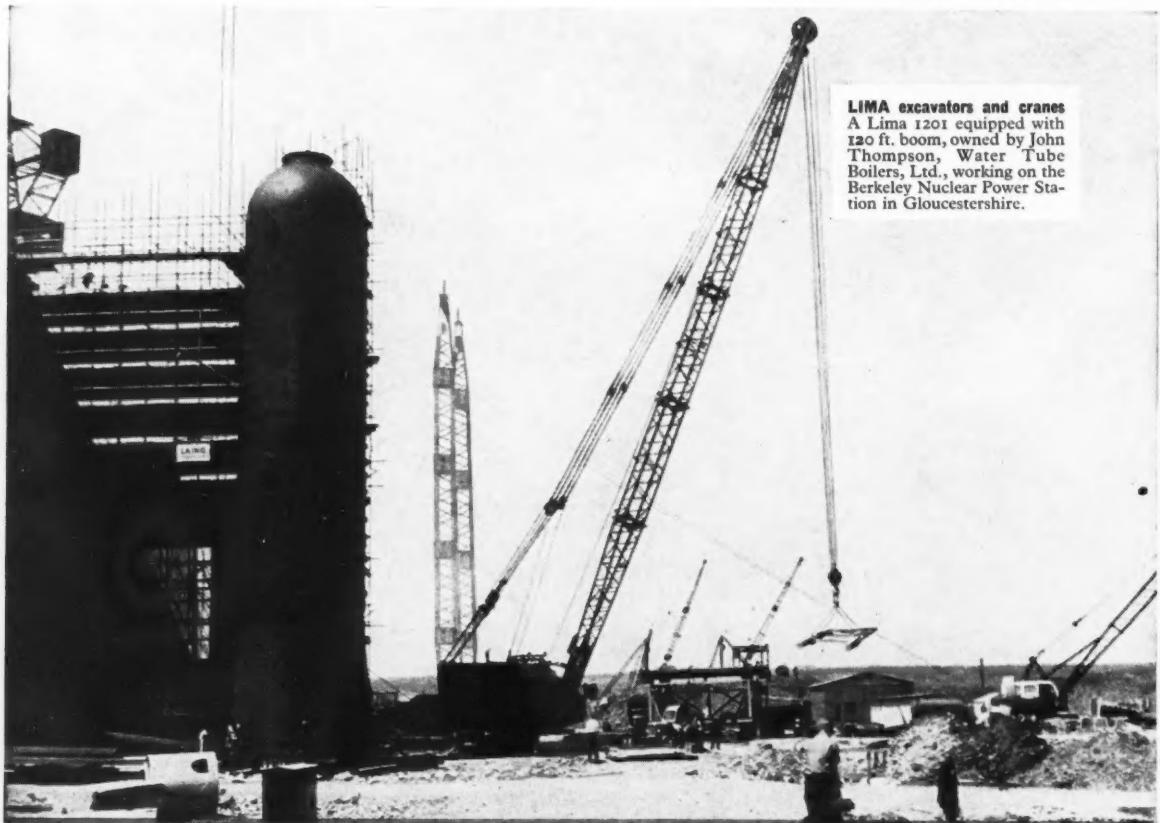
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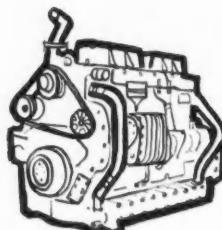
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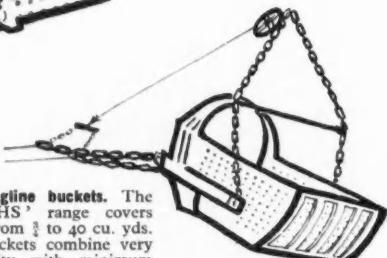
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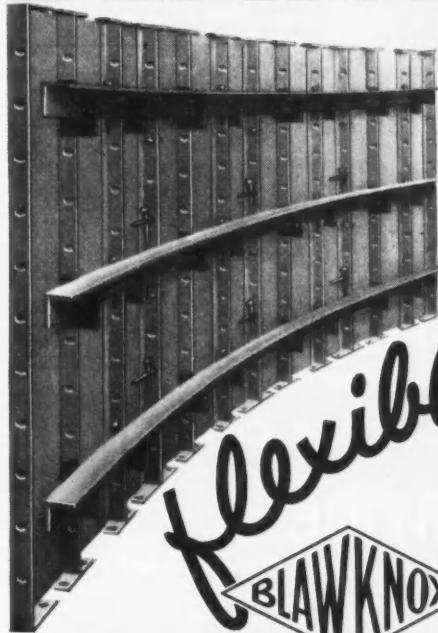
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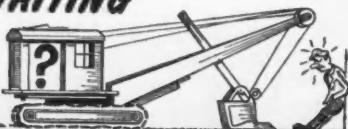
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1½ tons @ 65ft. 6in. radius 89ft. 9in. high

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TRENCH SHEETING, 8ft., 35 per ft.  
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Write Box P.2326, "The Contract Journal."

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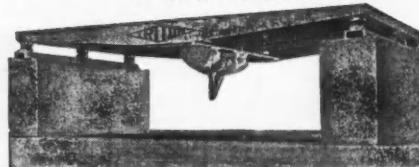
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TS.18—HD60 Allis-Chalmers 11½yd. TRACTO-SHOVEL, 1957, £2,350.  
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TE.460—3-Tine RIPPER, Ruston, £360.  
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C.901—Coles Ajax 6-ton Diesel/Electric MOBILE CRANE, £7,725.  
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Ferguson Diesel TRACTORS.  
Sykes and Wickham Diesel-driven Lift and Force Pumps.

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**AVAILABLE** for immediate HIRE: D6, D4, TD14 and TD18 TRACTORS, DOZERS, SCRAPERS; 12½-ton Allen Parsons TRENCHER, 19RB and 18RB EXCAVATORS with all accessories; DINKUM DIGGERS and Drott SKID-SHOVELS. Apply TILBURY CONSTRUCTION CO., LTD., Ruscombe Works, Tilbury, Berks. Tel: Tilbury 177.

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Keen rates—low haulage.

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Benford 10cwt. DUMPER	£140
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SPARES for Jones 2D Crane, Aveling-Barford Dumper, Muir-Hill and International TD18.	

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## ★ Further Classified Plant Advertisements on pages 349-356

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**FOR HIRE AND SALE:** ARMSTRONG-WHITWORTH PNEUMATIC POKER-TYPE CONCRETE VIBRATORS. We are distributors for all types of Armstrong-Whitworth Pneumatic CONTRACTORS' TOOLS, including Concrete Breakers, Light Picks, Clay Diggers, Rock Drills, Pumps, Backfill Rammers and Tamers, Hoses and Accessories. We hold a large stock of Spares and can give a 48-hour repair service. New and Second-hand Air Pumps COMPRESSORS for SALE. Send for list.

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**WANTED TO BUY:** Three DW21 MOTORIZED SCRAPERS. One D9 TRACTOR. Two D7 TRACTORS, with Dozer Equipment and Winch. Three D8 TRACTORS and Winch. One 19RB EXCAVATOR. Three D6 EXCAVATORS. 15-ton and 22-ton Euclid REAR DUMPS. Write Box P.2314, "The Contract Journal."

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RYE-ARC, LTD., Plant Hire Division, Silvertown Works, North Woolwich Road, London, E.18. 'Phone: ALBERT Dock 4381 (10 lines).

**FOR SALE:** No. 1 DINIKUM DIGGER, Mk. III. No. 49, mounted on a Fordson Major Diesel Tractor with Skyfl 3½ cu. yd. Forward Shovel and 18in. and 24in. Excavator Buckets, in good working order. Lying Birmingham; can be seen on appointment.—Telephone Aston Cross 2865.

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**Wanted Four D.8 or D.9 with scrapers**

Long-term block hire. Advertiser would prefer to man.

Write Box P.2319, "The Contract Journal"

**FOR HIRE:** EXCAVATORS, 3½ and 1½ cu. yd., all equipments. TRACTORS, TD9, TD18, D6, D7, with Dozers and DUMPERS and TIPPING WAGONS; COMPRESSORS; ROAD ROLLERS; CONCRETE MIXERS, etc. All with experienced operators.

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**STEEL SHEET PILES and TRENCH SHEETS** urgently WANTED. All sections bought; large and small quantities. Immediate payment.

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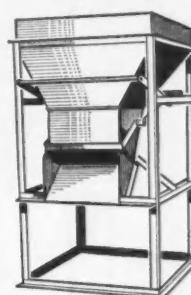
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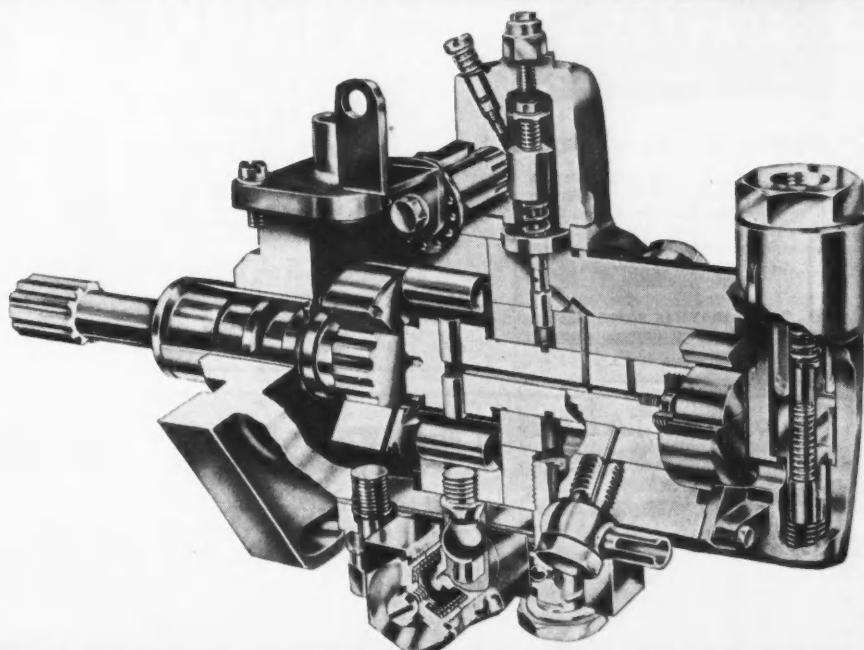
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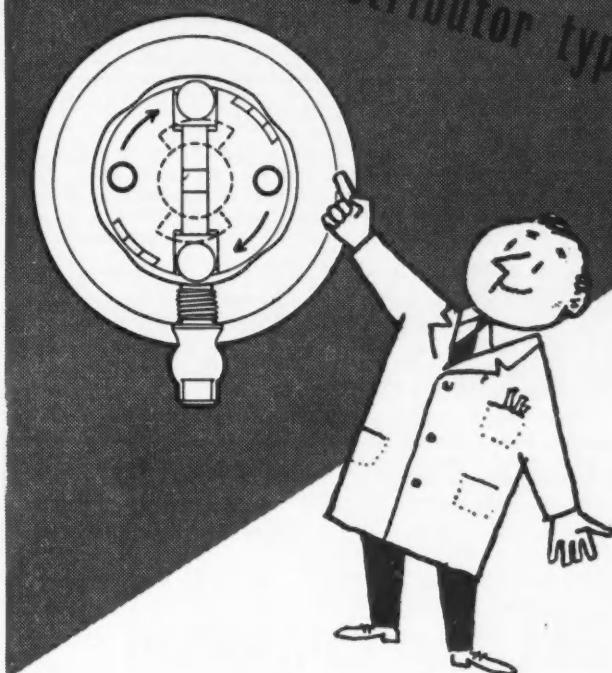
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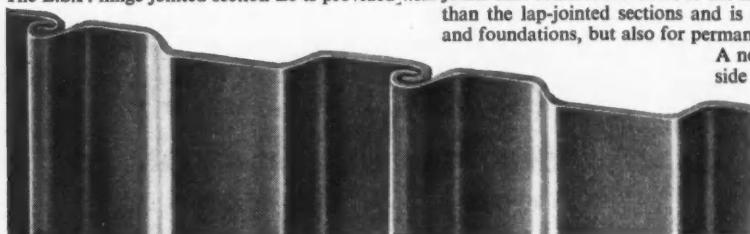
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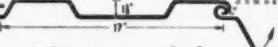
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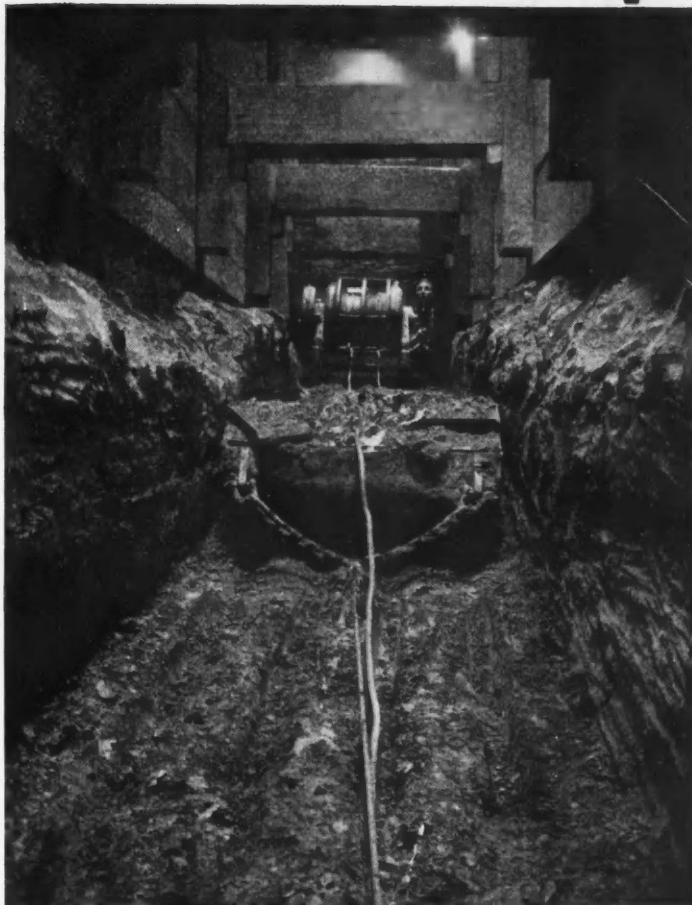
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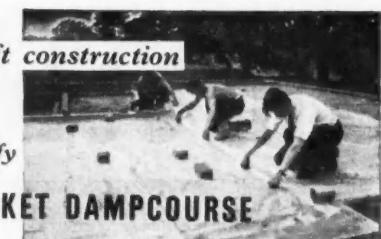
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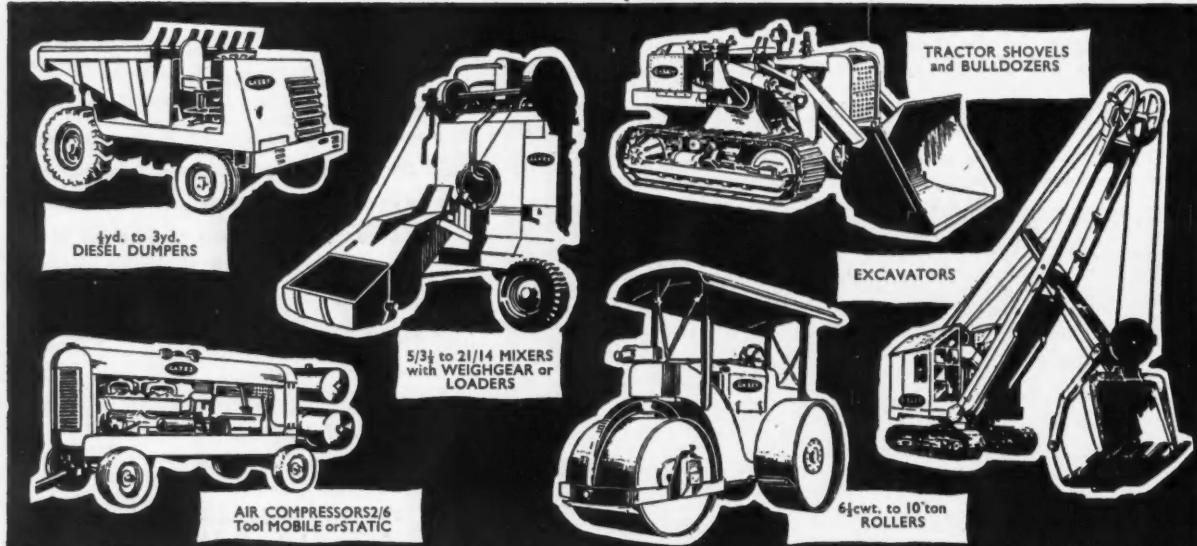
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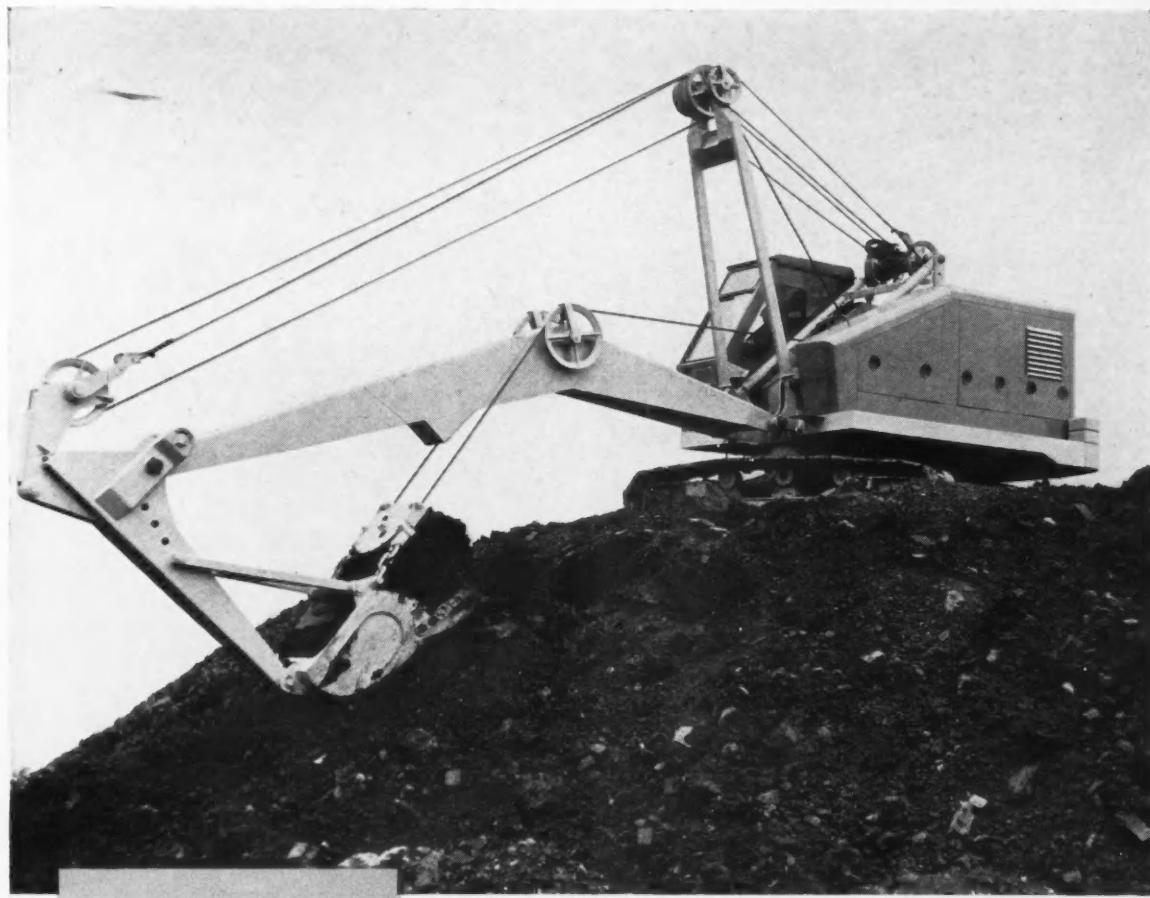
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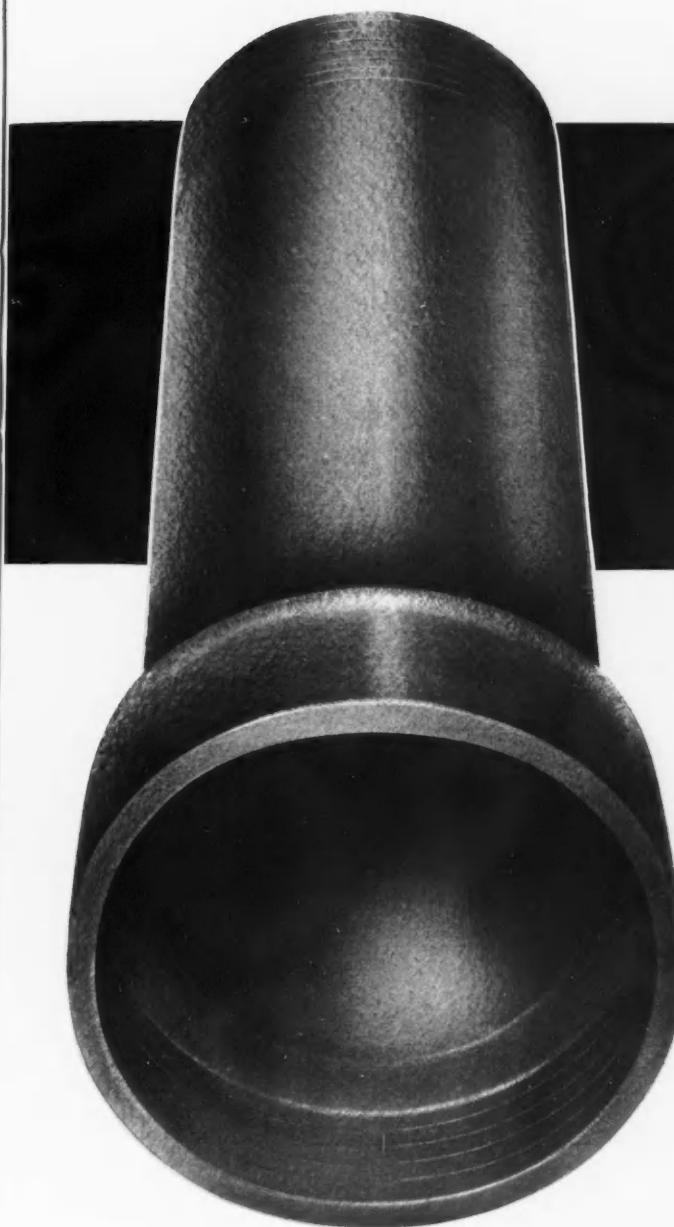
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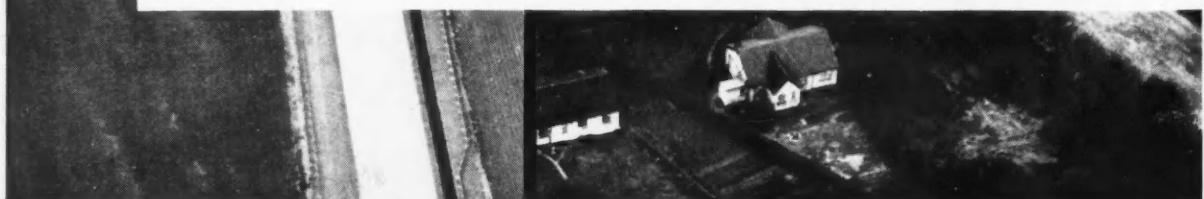
*Agent Authority for the Ministry of Transport: ESSEX COUNTY COUNCIL  
County Surveyor: H. J. Berry, M.I.C.E., M.I., Mun.E. Contractors: W. & C. FRENCH LTD.*

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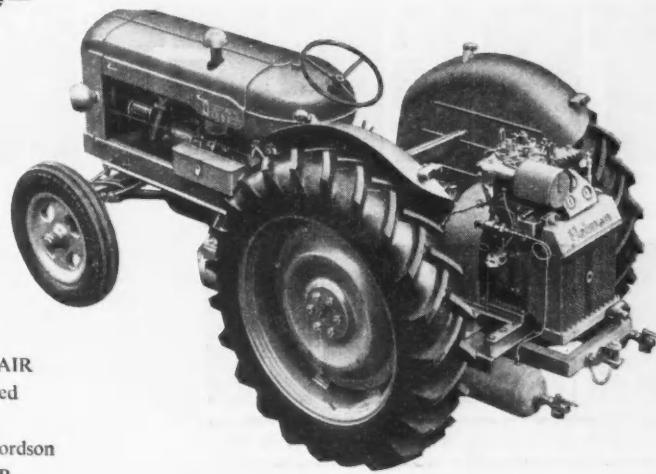


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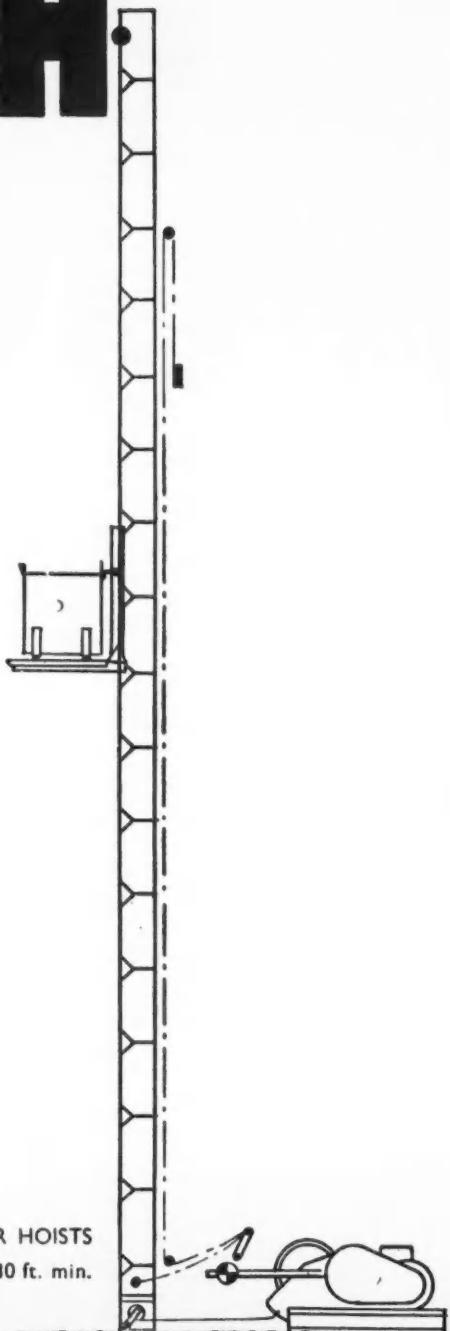
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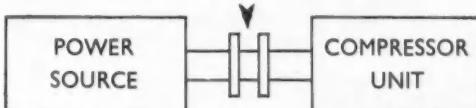
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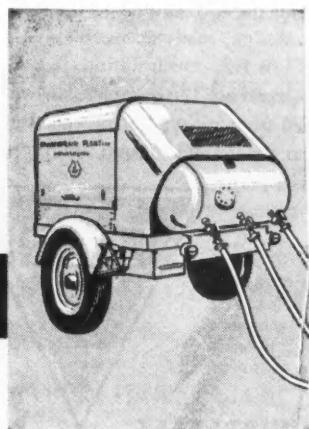
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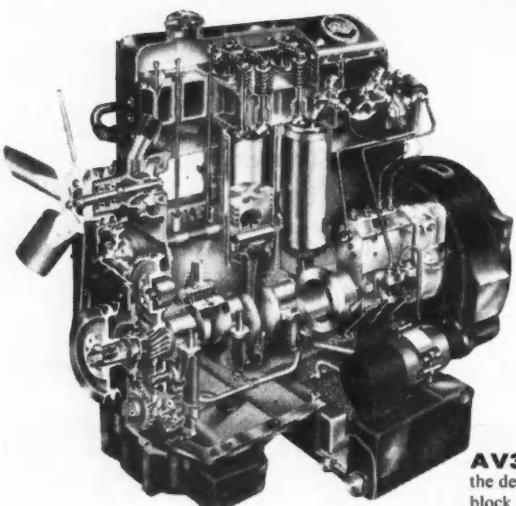
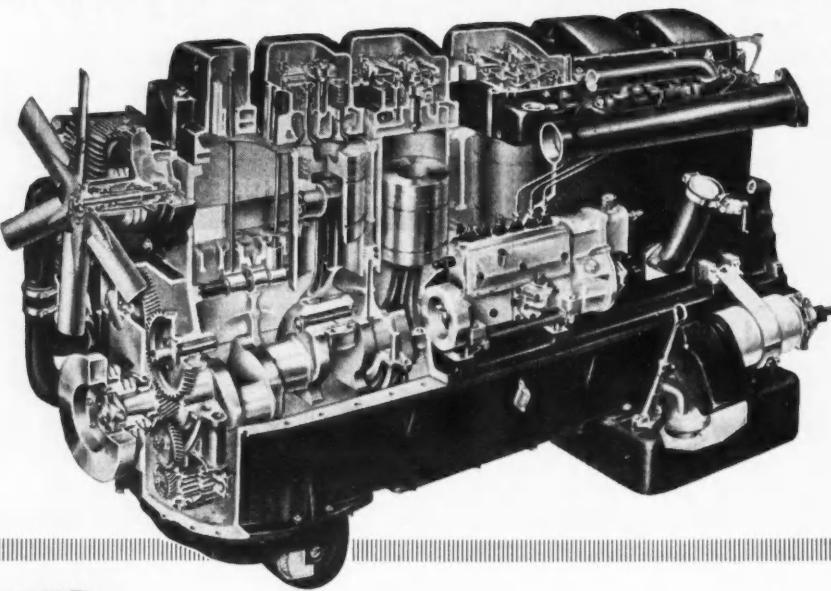
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**AV1100G** The most powerful of the A.E.C. power units, this 6-cylinder, 4 stroke diesel develops 275 b.h.p. at 1900 r.p.m. and gives extremely high performance with low fuel consumption.



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# COMPACTORS ENGINEERING LTD.

LOCKFIELD AVENUE, BRIMSDOWN, ENFIELD, MIDDX. TELEPHONE: HOWARD 4063-5

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# ALCON

# range

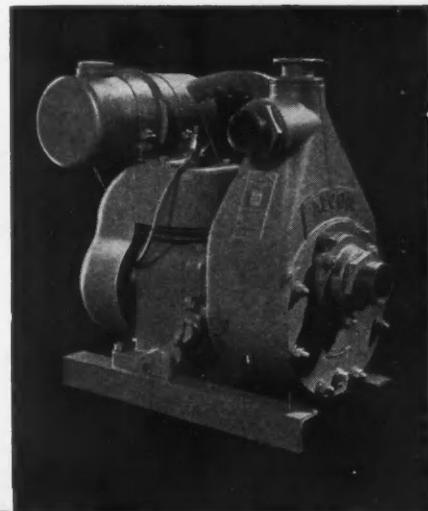
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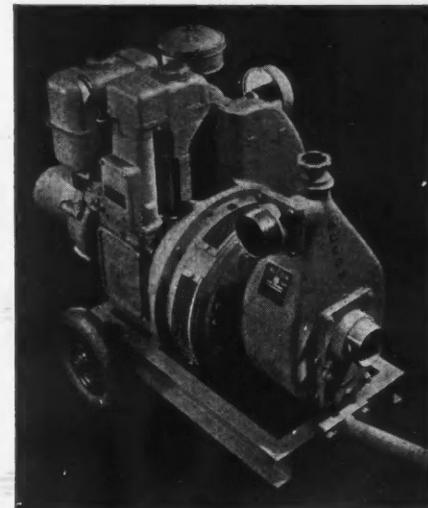
Alcon pumps are available with outputs from 500 to 75,000 gallons per hour; the smaller models are supplied with American Briggs & Stratton or Clinton engines, or with British Villiers, J.A.P. or the latest B.S.A. engines. All models are available as electric powered units. Larger sizes have diesel engines fitted as standard.

For further details, or for technical advice on proposed applications, write to:-

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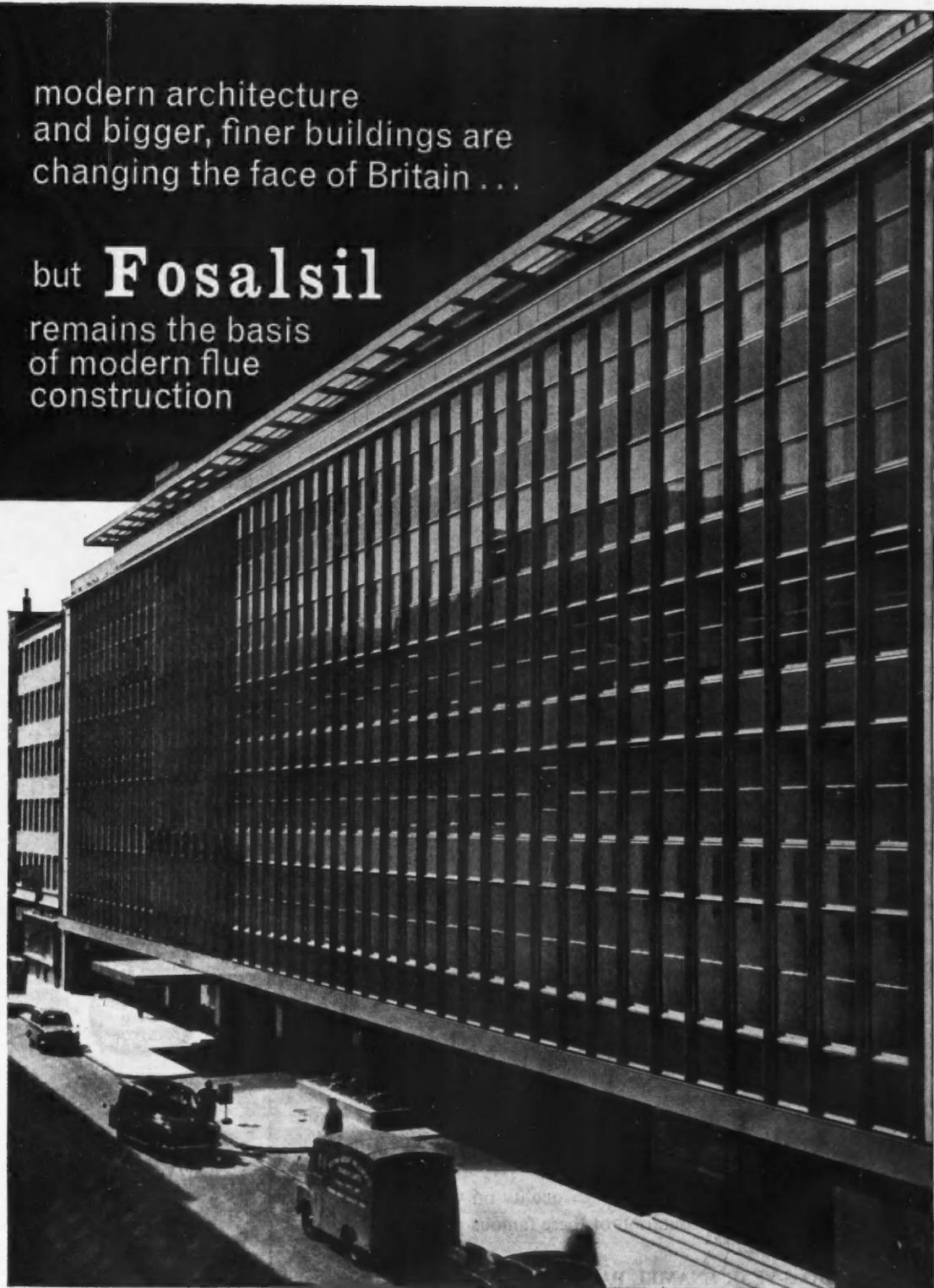
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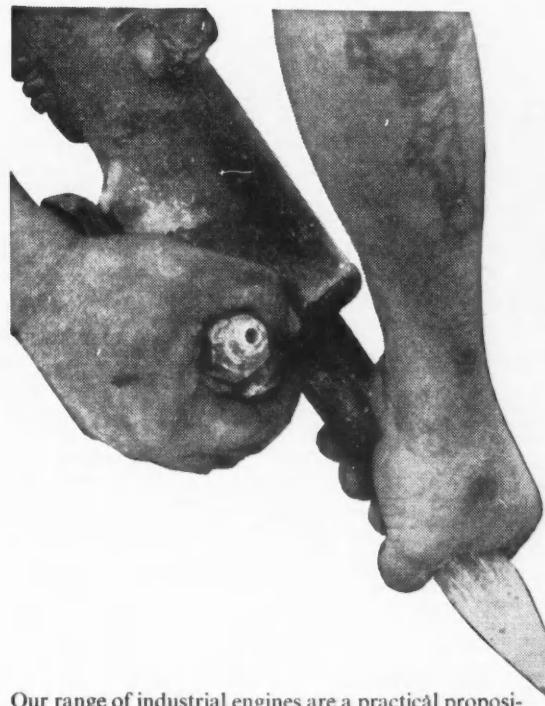
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*For further details of these and other Walpamur products  
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## THE CONTRACT JOURNAL

July 21 1960

## CONTRACTS

COUNTY COUNCIL OF ESSEX.  
HIGHWAYS DEPARTMENT.

TENDERS are invited for the IMPROVEMENT of the LONDON-NORWICH TRUNK ROAD, A.11, at the Junction with the A.12, near Wimborne.

The Work includes the Construction of a Roundabout having a Central Island of 180ft. dia. and the Reconstruction of approx. 370 lin. yd. of Trunk Road.

New carriageways will consist of a cement-bound granular base, surface with hot-rolled gravel and asphalt. Applications for Tender documents should be made to the County Surveyor, Old Court, Chelmsford, accompanied by a deposit of £3, which will be returned if a bona-fide Tender is received and not subsequently withdrawn.

Tenders must be delivered to the undersigned by not later than 5th AUGUST, 1960.

CHRISTIAN BRERRIDGE,  
Clerk of the County Council.

County Hall,  
Chelmsford.

WARWICKSHIRE COUNTY COUNCIL.  
ROADS COMMITTEE.

## LONDON-HOLYHEAD TRUNK ROAD, A.45.

## MERIDEN BY-PASS—CONSTRUCTION OF HARD SHOULDER.

TENDERS are invited for the CONSTRUCTION of HARD SHOULDERS 8ft. wide, approx. seven miles in length, including Alterations to the existing Drainage System and the Construction of two additional Lay-bys. The period fixed for completion is six months.

Conditions of Contract, Specification and Bill of Quantities may be obtained from DAVID WATSON, M.I.C.E., M.I.Mun.E., County Surveyor, Shire Hall, Warwick, on payment of a deposit of £2 2s which will be returned only upon receipt of a bona-fide Tender or the return of all documents.

Working Drawings and other relevant details may be examined at the Offices of the County Surveyor at any time during normal office hours.

Tenders are to be returned in plain sealed envelopes endorsed "Tender for Meriden By-pass — Hard Shoulders," addressed to the County Surveyor, by not later than FRIDAY, 5th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

L. EDGAR STEPHENS,  
Clerk of the Council.

Shire Hall,  
Warwick.

COUNTY BOROUGH OF BURY.  
RECONSTRUCTION OF TENNIS COURTS.

TENDERS invited for CONVERTING TWO SHALE COURTS into HARD COURTS at WHITEHEAD RECREATION GROUND.

Contract documents may be obtained from Borough Engineer's Office, Town Hall, Bury, where Drawings may be inspected.

Tenders, in the official envelope provided, should reach me not later than 10 a.m., 2nd August, 1960.

EDWARD S. SMITH,  
Town Clerk.

Town Hall,  
Bury.

5th July, 1960.

BOROUGH OF TORQUAY.  
CONSTRUCTION OF MULTI-STORY CAR PARK.

TENDERS are to be invited from selected contractors with experience of similar works, for the CONSTRUCTION this winter of a REINFORCED CONCRETE MULTI-STORY CAR PARK at BEACON QUAY, Torquay.

Firms wishing to be considered for invitation to tender should submit their names, and particulars of similar works carried out, to the Borough Engineer, Town Hall, Torquay, not later than SATURDAY, 30th July, 1960.

T. ELVED WILLIAMS,  
Town Clerk.

Town Hall,  
Torquay.

RICKMANSWORTH URBAN DISTRICT COUNCIL.  
PROPOSED SURFACE WATER CULVERT—DAVENHAM AVENUE.

TENDERS are invited for the CONSTRUCTION of 21in. yd. of 27in. dia. PRECAST CONCRETE CULVERT and for the CONSTRUCTION of FIVE MANHOLES. The works are to be carried out in gardens at the rear of houses in DAVENHAM AVENUE and BATCHWELL LANE, Rickmansworth. Conditions of Contract, Specification, Bill of Quantities, Form of Tender and Drawings may be obtained from the Engineer and Surveyor on payment of Two Guineas deposit which is returnable on receipt of a bona-fide Tender.

Tenders, in a plain sealed envelope endorsed "Tender for the Proposed Surface Water Culvert—Davenham Avenue," are to be returned to the undersigned not later than First Post on 26th JULY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

C. G. RANSOME WILLIAMS,  
Clerk of the Council.

Council Offices,  
Rickmansworth.

5th July, 1960.

LYDNEY RURAL DISTRICT COUNCIL.  
HEWLSFIELD, ST. BRIAVELS AND MORK WATER MAIN EXTENSION.

TENDERS, on a FIXED-RATE BASIS, are invited for the LAYING of 5,541yd. of 4in. and 7,505yds. of 3in. SPUN-IRON WATER MAIN, including all necessary Valves and Fittings and ancillary Works, in the Parish of HEWLSFIELD and ST. BRIAVELS.

Specification, Bill of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Council Offices, Lydney, on payment of a deposit of Five Guineas, which will be refunded on the receipt of a bona-fide Tender and the return of all documents supplied in connection with the Tender.

Drawings and Conditions of Contract may be inspected at the office of the Engineer and Surveyor, Council Offices, Lydney, on payment of a deposit of Five Guineas, which will be refunded on the receipt of a bona-fide Tender and the return of all documents supplied in connection with the Tender.

Tenders, enclosed in the envelope supplied, must be delivered to the undersigned not later than First Post on WEDNESDAY, 26th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and the acceptance of any Tender will be subject to the approval of the Ministry of Housing and Local Government.

Dated this fourth day of July, 1960.

E. A. BEECH,  
Clerk of the Council.

Council Offices,  
Lydney, Glos.

Clerk of the Council.

## CONTRACTS

BEDFORDSHIRE COUNTY COUNCIL.  
HIGHWAYS ACT, 1959.

TENDERS are invited for the MAKING-UP of the FOLLOWING ROADS:

Sunder Lane and Barrie Avenue, Dunstable.

The work consists of Regulating and Sur-

facing the existing Carriageway and Foot-

paths and Soiling Verges, the length of

the works being 290 lin. yd. approx.

St. Michael's Avenue, Hemington.

The work consists of the Construction of new

Carriageway, with Kerbs and Channel, Foot-

paths, Verges and Storm Water Drainage,

the length of the works being 140 lin. yd. approx.

Laburnum Grove, Streteley.—The work consists

of the Construction of a new Carriageway,

with Kerbs and Channel, Footpaths, Verges

and Storm Water Drainage, the length of

the works being 90 lin. yd. approx.

Brightwell Avenue, Totternhoe.—The work

consists of the Construction of a new Carriageway,

with Kerbs and Channel, Footpaths, Verges

and Storm Water Drainage, the length of

the works being 140 lin. yd. approx.

Copies of the Conditions of Contract, Specification and Bill of Quantities can be obtained from the County Surveyor, Dents Road, Bedford, on payment of Two Pounds deposit, which will be refunded on receipt of a bona-fide Tender or the return of all documents before the tender date.

The Drawings may be examined at the above Office by appointment during working hours.

Tenders must be returned to me by FRIDAY, 5th August, 1960.

GEORE BREWIS,  
Clerk of the County Council.

Shire Hall,  
Bedford.

BOROUGH OF HENDON.  
FLATTED FACTORY—NORTH CIRCULAR ROAD.

The BOROUGH COUNCIL invites applications from general contractors for inclusion in a selected list of TENDERERS for the ABOVE CONTRACT.

The work will comprise the ERECTION of a FIVE-STOREY BUILDING and ELEVATED ROADS and RETAINING WALLS, all of Heavy Reinforced Concrete Construction.

The firms applying should furnish particulars of any recent works of a similar type which they have undertaken. The selected firms will receive the Tender documents early in August, for return by 12th SEPTEMBER.

Applications are to be received by the Borough Engineer and Surveyor, Town Hall, Hendon, London, N.W.4, by 12 Noon on 25th JULY, 1960.

R. H. WILLIAMS,  
Town Clerk.

Town Hall,  
Hendon, N.W.4.

BOROUGH OF SOUTHALL.  
SOUTHERN SOIL RELIEF SEWER.

The Borough of Southall, under the direction of their Consulting Engineers, MRSSRS. J. D. AND D. M. WATSON, of 67 Tufton Street, Westminster, S.W.1, propose to carry out the ABOVE WORKS, involving approx. 1,700yds. of 24in. dia. CONCRETE PIPE in Heading, together with Manholes in Pre-cast Concrete Segmental Construction. The route of the sewer lies within a built-up area.

The Council invite contractors with wide experience in this class of works and who would be interested in submitting a Tender, to forward their names and addresses, together with a brief synopsis of their experience, to the Borough Engineer, Town Hall, Southall, Middlesex, and a copy to the Consulting Engineers, by First Post on WEDNESDAY, 27th July, 1960.

Tender documents will be issued to selected contractors by the Consulting Engineers during the middle of August.

J. S. SYRETT,  
Town Clerk.

7-9 South Road,  
Southall, Middx.

CITY OF PETERBOROUGH.  
LINCOLN ROAD RECONSTRUCTION.

Includes Reshaping and Realignment of 6,000 sq. yd. of Roadway, together with 800 lin. yd. of Kerbing. Tender documents, on payment of £2 from City Engineer, Town Hall, Peterborough. Tenders to be returned before Noon, 9th AUGUST.

C. PETER CLARKE,  
Town Clerk.

Town Hall,  
Peterborough.

GRANGE URBAN DISTRICT COUNCIL  
AND NORTH LONSDALE RURAL DISTRICT COUNCIL.

## CARTMEL VALLEY WATER MAIN.

TENDERS are invited, on a Fixed-price Basis, from experienced public works contractors, for the REPAIRS of approx. Six Miles of existing STEEL PIPEs, with 6in. and 8in. ASBESTOS-CEMENT PIPEs, including the Reconstruction of existing Services and Installation of Valves, Hydrants and Meters.

Application for the Specification and Bill of Quantities should be made to the Council's Consulting Engineers, MRSSRS. WARD, ASHCROFT AND PARKMAN, 38 The Temple, Dale Street, Liverpool, 2, together with a deposit of £2 2s. 6d. payable to Messrs. Ward, Ashcroft and Parkman, which will be returnable on receipt of a bona-fide Tender and the return of the documents and Drawings supplied.

Sealed Tenders, marked "Reconstruction of Sewers," are to be delivered to the undersigned not later than 12 Noon on MONDAY, 22nd August, 1960.

The Council does not bind itself to accept the lowest or any Tender.

B. ANSON,  
Clerk of the Council.

Council Offices,  
Alderley Edge.

## NORTHAMPTON RURAL DISTRICT COUNCIL.

## RECONSTRUCTION OF ROADE SEWAGE DISPOSAL WORKS.

TENDERS are invited from contractors experienced in sewage disposal works, for the CONSTRUCTION of SETTLEMENT TANKS, FILTERS, STORM TANKS, HUMUS TANKS, DOSING SIPHONS, PUMPING STATION, SCREENS, ACCESS ROAD, OFFICE and STORE, together with ancillary Pipework, Channels and Manholes.

Copies of Layout Plan, Bill of Quantities and Specification can be obtained from MR. R. J. MILLER, Surveyor to the Council, 1 Cheyne Walk, Northampton, upon payment of £3 3s. deposit, returnable on receipt of bona-fide Tender.

The Tenders, in plain sealed envelopes, are to reach the undersigned by 10 a.m., SATURDAY, 27th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

## CONTRACTS

DORSET COUNTY COUNCIL.  
ROADS AND BRIDGES DEPARTMENT.

## PRIVATE STREET WORKS.

## DUDSBURY ROAD (PART) AND KINGSWAY (PART), FERNDOWN.

The County Council will shortly invite contractors to TENDER for MAKING-UP TWO STREETS in Ferndown, near Wimborne.

The work comprises the following approx. quantities: 2,000 lin. yd. of 6in. sq. Draining, 6,000 sq. yd. Surfacing in Carriageway and Footpaths; and 700 lin. yd. Surface Water Drainage.

The I.C.E. Conditions of Contract will apply. Contractors wishing to tender should send their names to the COUNTY SURVEYOR, County Hall, Dorchester, by the 30th JULY, 1960, and in due course Tender documents will be sent to them.

DORSET COUNTY COUNCIL.  
ROADS AND BRIDGES DEPARTMENT.

## SURFACE WATER DRAINAGE.

The County Council are shortly to invite contractors to TENDER for a SURFACE WATER DRAINAGE SCHEME in WEST PARLEY (which adjoins the Bournemouth area).

The work will comprise the Provision and Laying of approx. 2,100 lin. yd. of Concrete Pipe varying from 36in. to 15in. dia., together with associated Excavation, Concreting, Construction of Manholes, and the usual ancillary works.

The I.C.E. Conditions of Contract will apply. Contractors wishing to tender should send their names and a deposit of £2 (which will be refunded on receipt of a bona-fide Tender) to the COUNTY SURVEYOR, County Hall, Dorchester, not later than 30th JULY, 1960, and in due course Tender documents will be sent to them.

BOROUGH OF DROITWICH.  
STREET LIGHTING—A.38.

TENDERS are invited from experienced contractors for the SUPPLY, DELIVERY and ERECTION of 55 PLAIN STEEL STREET LIGHTING COLUMNS, 30ft. mounting height, with 200-W. Sodium Lamps, together with Wiring, Lanterns and auxiliary gear, and the DISMANTLING of 55 existing LIGHTING POINTS.

Conditions of Contract and Plan may be inspected at, and Specification, Bill of Quantities and Form of Tender obtained from, the Borough Engineer and Surveyor, Town Hall, Droitwich, during normal office hours, upon payment of a deposit of £2 2s., which sum will be returned on receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Street Lighting—A.38," to be delivered to the undersigned not later than 10 a.m. on THURSDAY, 28th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

S. G. FOSTER,  
Town Clerk.

Town Hall,  
Droitwich, Worcs.  
July, 1960.

CITY OF NEW SARUM.  
ESSEX SQUARE REDEVELOPMENT, SECTION 1.  
SALISBURY.

TENDERS are invited for the CONSTRUCTION of SIX HOUSES, 86 ft. long, FIVE GARAGES, together with Outbuildings, Pavings, Drainage and all ancillary Works, at ESSEX SQUARE, WEST HARNHAM, Salisbury.

Tenders are to be on a Fixed-price Basis and on Bills of Quantities which will be available on Saturday, 30th July, 1960. Copies of the Bills of Quantities and Form of Tender can be obtained from the City Engineer, The Council House, Salisbury.

Tenders, in plain sealed envelopes, must be delivered to the undersigned not later than Noon on MONDAY, 29th August, 1960.

GEO. RICHARDSON,  
Town Clerk.

ALDERLEY EDGE URBAN DISTRICT COUNCIL.  
RECONSTRUCTION OF SEWERS.

TENDERS are invited from experienced contractors in this class of work, for the LAYING of approx. 3,300yds. of CONCRETE AND STEEL SEWERS of 9in. to 12in. dia. and the CONSTRUCTION of an EJECTOR HOUSE.

Copies of the Specification, Bill of Quantities and Form of Tender may be obtained from the Council's Consulting Engineers, MRSSRS. WARD, ASHCROFT AND PARKMAN, 38 The Temple, Dale Street, Liverpool, 2, upon payment by cheque of £5 of Five Guineas deposit which will be returned upon the receipt of a bona-fide Tender and the return of the documents and Drawings supplied.

Sealed Tenders, marked "Reconstruction of Sewers," are to be delivered to the undersigned not later than 12 Noon on MONDAY, 22nd August, 1960.

The Council does not bind itself to accept the lowest or any Tender.

B. ANSON,  
Clerk of the Council.

Council Offices,  
Alderley Edge.  
July, 1960.

NORTHAMPTON RURAL DISTRICT COUNCIL.  
RECONSTRUCTION OF ROADE SEWAGE DISPOSAL WORKS.

TENDERS are invited from contractors experienced in sewage disposal works, for the CONSTRUCTION of SETTLEMENT TANKS, FILTERS, STORM TANKS, HUMUS TANKS, DOSING SIPHONS, PUMPING STATION, SCREENS, ACCESS ROAD, OFFICE and STORE, together with ancillary Pipework, Channels and Manholes.

Copies of Layout Plan, Bill of Quantities and Specification can be obtained from MR. R. J. MILLER, Surveyor to the Council, 1 Cheyne Walk, Northampton, upon payment of £3 3s. deposit, returnable on receipt of bona-fide Tender.

Tenders, in plain sealed envelopes, are to reach the undersigned by 10 a.m., SATURDAY, 27th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

CLIFFORD E. JONES,  
Clerk of the Council.

Council Offices,  
1 Cheyne Walk,  
Northampton.  
7th July, 1960.

**CONTRACTS****EAST SUFFOLK COUNTY COUNCIL  
PROPOSED OFFICES AT LOWESTOFT.**

The Council proposes to invite FIRM-PRICE TENDERS from selected builders for the ERECTION of a BLOCK of OFFICES with FOUR FLOORS and a SEMI-BASEMENT, totalling some 19,000 sq. ft. floor area.

Drawings, prepared under the direction of MR. E. J. CUNDIFFE, A.R.I.B.A., County Architect, can be seen at the County Hall, Ipswich, and at the County Offices, The Marina, Lowestoft, between 9 a.m. and 5 p.m.

Builders contemplating tendering should submit their names to the COUNTY ARCHITECT, County Hall, Ipswich, before 5th August, 1960. From the names submitted a number of builders will be selected, and these will be furnished with Bills of Quantities, etc., on or about 20th July. Those builders not selected will be notified at the same time. Tenders are required by the 6th SEPTEMBER, 1960.

**COUNTY BOROUGH OF SOUTHAMPTON.****BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.**

Southampton C.B.C. invites TENDERS for the FOLLOWING CONTRACT on Bills of Quantities available by 15th AUGUST, 1960:

Contract B.33—Erection of 24 Flats and 10 Mews-Betties in One 6-storey Block adjoining Shops, Weston Farm Estate.

Applications for Tender documents should be received by the BOROUGH ENGINEER, Civic Centre, Southampton, not later than 10 a.m. on FRIDAY, 29th July, 1960.

**COUNTY BOROUGH OF EAST HAM.  
STREET LIGHTING.****BURGES ROAD (PART) AND WATSON AVENUE (PART).**

TENDERS are invited for the FOLLOWING:

(1) The Supply and Erection of Concrete Lighting Columns.

(2) The Supply and Erection of Street Lighting Equipment.

The Scheme provides for the Supply and Erection of 35 15ft. Reinforced Concrete Columns, Two 18ft. Reinforced Concrete Columns and One 25ft. Steel Column, together with Lanterns, Lamps, and ancillary gear.

Separate Forms of Tender and Specification for either or both Contracts may be obtained on application to the Borough Engineer, Town Hall, East Ham, E.6, upon receipt of a deposit of £2.2s.

Tenders to be returned, in the envelope provided, by not later than 12 Noon on 15th AUGUST, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

R. H. BUCKLEY,  
Town Clerk.

Town Hall,  
East Ham, E.6.

**BOROUGH OF EPSON AND EWELL.  
WATER DEPARTMENT.****CONSTRUCTION OF 24IN. BOREHOLE.**

The CORPORATION invite TENDERS for the CONSTRUCTION and TESTING of a 24in. dia. BOREHOLE to a depth of approx. 500ft. of which some 200ft. will be in rock formation.

Form of Tender, Specification and Bill of Quantities may be obtained from MR. L. D. EVANS, B.Sc., A.M.I.C.E., A.M.I.W.E., Borough Water Engineer and Manager, East Street, Epsom.

Tenders, endorsed "Tender for Borehole," must be forwarded to me, reach the undersigned not later than 12 Noon, SATURDAY, 6th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

EDWARD MOORE,  
Town Clerk.

Epsom.

**BOROUGH OF STAMFORD.  
SEWAGE DISPOSAL WORKS EXTENSIONS, 1960.**

TENDERS are invited from suitably experienced contractors for the CONSTRUCTION IN REINFORCED CONCRETE of three 36ft. dia. SLUDGE DIGESTION TANKS, each of 130,000 gallons capacity; two PYRAMIDAL HUMUS TANKS, each of 16,000 gallons capacity; and ancillary works.

Drawings may be seen at the Offices of the Engineers, MESSRS. PICK, EVERARD, KEAY AND GIMSON, 6 Millstone Lane, Leicester, from whom the Specification, Bill of Quantities and Layout Plan may be obtained on payment of a deposit of five Guineas, which will be refunded on receipt of a bona-fide Tender and the return of all documents Cheques to be made payable to the Stamford Borough Council.

Tenders, on the forms supplied and in the envelopes provided, are to be delivered to the undersigned not later than Noon on MONDAY, 15th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. BEDFORD,  
Town Clerk.

Town Hall,  
Stamford, Lincs.

15th July, 1960.

**CITY OF CAMBRIDGE.  
ARBURY ROAD HOUSING ESTATE NORTH SITE.  
AMENDED ADVERTISEMENT.****CONSTRUCTION OF ROADS AND SEWERS—  
STAGE 5.**

TENDERS are invited for the CONSTRUCTION of ROADS and SEWERS at the ABOVE SITE, comprising 14.9 acres of land, of Hot Rolled Gravel Asphalt Carriageway, 3,770 lin. yd. of Kerb, 690 lin. yd. of Soil and Surface Water Sewer 15in.-9in. dia., and other ancillary works.

Applications for the Form of Tender, Bills of Quantities and Specification should be made to the City Engineer and Surveyor, The Guildhall, Cambridge.

Tenders are to be returned by 3 p.m. on the 1st SEPTEMBER, 1960.

Applications must be accompanied by a deposit of Five Guineas which will be refundable on receipt of a bona-fide Tender. The Drawings and General Conditions of Contract can be inspected at the City Engineer's Office.

The lowest or any Tender will not necessarily be accepted.

ALAN H. I. SWIFT,  
Town Clerk.

The Guildhall,  
Cambridge.

**CONTRACTS****CARMARTHENSHIRE COUNTY COUNCIL.****FELINFOEL TO BRYN ROAD, C.128.****WIDENING AND RECONSTRUCTION OF  
LLETHRY ROAD, FELINFOEL.**

TENDERS are invited from experienced public works contractors for the EXECUTION of the ABOVE WORKS, comprising the REALIGNMENT, WIDENING and RECONSTRUCTION of the existing ROAD for a distance of approx. 1,350 lin. yd. to highway width of 36ft. together with other appurtenant works.

Specification, Bill of Quantities, Conditions of Contract and Form of Tender may be obtained from the undersigned on payment of a deposit of £2 which will be returned on receipt of a bona-fide Tender which is not subsequently withdrawn.

Plans may be inspected during normal office hours at the undersigned's office.

Tenders (with all documents), in a plain sealed envelope not bearing any name or mark indicating the sender, and endorsed "Road Widening—Llethy Road, Felinfoel," must be delivered to W. S. THOMAS, Clerk of the County Council, County Hall, Carmarthen, not later than 26th JULY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. L. RICHARDS, A.M.I.C.E.,  
County Engineer and Surveyor.  
Roads and Bridges Dept.,  
County Hall,  
Carmarthen.  
July, 1960.

**COUNTY BOROUGH OF BOLTON.  
TRUNK ROAD A.6—IMPROVEMENT.**

TENDERS are invited for the ABOVE IMPROVEMENT, which involves Earthworks, Drainage, Construction of 1½-mile new Carrigeway, and ½-mile Road Widening.

Technical documents and Key Plan from the Borough Engineer, to whom Tender is to be delivered, sealed in envelope provided, not later than 10 a.m. on MONDAY, 8th August. Deposit for documents Five Guineas, returnable on receipt of bona-fide Tender, not subsequently withdrawn.

Drawings may be inspected during normal office hours.

PHILIP S. RENNISON,  
Town Clerk.

**BOROUGH OF TOTTENHAM.  
WARWICK GARDENS FAIRFAX/EFFINGHAM ROADS.**

76 DWELLINGS (BLOCKS 2—5 STOREYS HIGH). Builders wishing to TENDER are requested to notify the Borough Engineer, Town Hall, Tottenham, N.15, not later than 1st AUGUST, 1960, together with £2.2s. deposit refundable upon the submission of a bona-fide Tender. Plans may be seen at the Town Hall, N.15.

As soon as possible after the receipt of the deposit, copies of the Bills of Quantities, Form of Tender, and all necessary documents will be forwarded to the applicants, stating the closing date for the receipt of Tenders.

The Council do not bind themselves to accept the lowest or any Tender.

M. LINDSAY TAYLOR,  
Town Clerk.  
Town Hall,  
Tottenham, N.15.

**BOROUGH OF TOTTENHAM.****127 PARK LANE.****REVISED SCHEME.****18 FLATS IN FOUR-STORY BLOCKS.**

Builders wishing to TENDER are requested to notify the Borough Engineer, Town Hall, Tottenham, N.15, not later than 28th JULY, 1960, together with £2.2s. deposit refundable upon the submission of a bona-fide Tender. Plans may be seen at the Town Hall, N.15.

As soon as possible after the receipt of the deposit, copies of the Bills of Quantities, Form of Tender, and all necessary documents will be forwarded to the applicants, stating the closing date for the receipt of Tenders.

The Council do not bind themselves to accept the lowest or any Tender.

M. LINDSAY TAYLOR,  
Town Clerk.  
Town Hall,  
Tottenham, N.15.

**CITY AND COUNTY OF BRISTOL.****CITY ENGINEER AND PLANNING OFFICER'S DEPARTMENT.****MAIN DRAINAGE CONTRACT NO. 13.****MAIN PUMPING STATION—SALTMARSH DRIVE.**

TENDERS invited from civil engineering contractors for CIVIL ENGINEERING and BUILDING WORKS in connection with Main Pumping Station at Saltmarsh Drive, Lawrence Weston, Bristol. These works comprise Deep Excavations in alluvium and water-bearing gravels within the steel sheet piled foundations, heavily reinforced structure below ground level, and main building at ground level. Provision and Installation of Pumping Machinery is the subject of another contract.

Tender documents from City Engineer and Planning Officer, Cabot House, Deanery Road, Bristol, 1, on receipt of cheque for £10 payable to Bristol Corporation, refundable on receipt of bona-fide Tender.

Completed Tenders, in special envelope provided, to reach CITY ENGINEER AND PLANNING OFFICER by 12 Noon, 22nd AUGUST.

**RURAL DISTRICT COUNCIL OF LANGPORT.****PARISH OF LANGPORT—CONSTRUCTION OF A CAR PARK.**

TENDERS are invited for the CONSTRUCTION of a new CAR PARK at Whatley, Langport.

Plans, Specification and Bills of Quantities may be obtained from the undersigned, on payment of £2.2s. deposit, which is returnable on the receipt of a bona-fide Tender, not subsequently withdrawn.

Tenders, in plain sealed envelope endorsed "Car Park," to be received by the undersigned not later than SATURDAY, the 13th August, 1960.

ARTHUR ROTHWELL,  
Clerk of the Council.

Council Offices,  
Langport.  
11th July, 1960.

**CONTRACTS****BOROUGH OF MALDEN AND COOMBE.  
CONSTRUCTION OF CARRIGEWAY, FOOTWAYS  
AND SEWERS—PRESBURG ROAD AND  
BAZELGETTE GARDENS.**

Contractors desirous of TENDERING for the ABOVE WORKS are invited to submit their names to JOHN APSE, A.M.I.C.E., Borough Engineer and Surveyor, Municipal Offices, New Malden, Surrey. Documents will be forwarded in due course.

H. E. BARRETT,  
Town Clerk.

Municipal Offices,  
New Malden,  
Surrey.  
11th July, 1960.

**BOROUGH OF REDCAR.  
STREET LIGHTING. 1960-61.**

TENDERS are invited for the ERECTION of STREET LIGHTING UNITS in Redcar. The units consist of Stanton columns and lanterns by E.L.E.C.O., G.E.C. and Siemens-Edison Swan.

The Form of Tender and Specification may be obtained from the Borough Engineer, Ridley Road, Coatham Road, Redcar, all whose Office these documents and Drawings may be inspected during office hours.

Tenders, in envelope supplied, bearing no mark indicating the sender, and endorsed "Street Lighting, 1960-61," must be received by the undersigned not later than Noon on FRIDAY, 12th AUGUST, 1960.

HUGH CALDWELL,  
Town Clerk.

Municipal Buildings,  
Redcar.

**ROMSEY AND STOCKBRIDGE RURAL DISTRICT COUNCIL.****NORTHERN PARISHES WATER SUPPLY—  
STAGE 4—MOTTISFONT.****CONTRACT NO. 10.**

FIRM-PRICE TENDERS are invited from experienced public works contractors for the LAYING of approx. 1½ miles of 6in. dia. SPUN-IRON WATER MAINS, approx. 2½ miles of smaller dia. MAINS, and incidental works.

Conditions of Contract, Specification, Form of Tender and Bills of Quantities may be obtained from the Council's Consulting Engineers, MESSRS. LEMON AND BLIZARD, Telford House, Hulse Road, Southampton, upon payment of a deposit cheque of £2.2s. payable to the Rural District Council, which will be returned on the receipt of a bona-fide Tender and the return of all documents.

The Contract Drawings may be inspected at the Council Offices or at the Offices of the Consulting Engineers.

Tenders and priced Bills of Quantities, on the form supplied, should be delivered to me, in a plain sealed envelope, endorsed "Tender—Northern Parishes Water Supply—Stage 4—Contract No. 10," before Noon on 19th AUGUST, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. A. TANNER,  
Clerk to the Council.

Council Offices,  
Duttons Road,  
Romsey, Hants.  
11th July, 1960.

**EAST SUFFOLK AND NORFOLK RIVER BOARD.****PILING TO RIVER BANKS.****SUPPLY OF STEELWORK AND TIMBER.**

TENDERS are invited for the SUPPLY of the FOLLOWING:

(a) Approx. 2,764 cu. ft. of English Oak in 8ft. lengths of 2in. x 9in. Piling and 20ft. lengths of 3in. x 9in. and 3in. x 11in. Walling and 2in. x 5in. Capings.

(b) Approx. 902 cu. ft. of Greenheart or Jarrah in 18ft. lengths of 3in. x 9in. Piling.

(c) Approx. 16 tons of Welded Mild Steel Channel Box Piles, together with Bolts and Washer Plates.

Further particulars and Tender Forms may be obtained from the Chief Engineer at the address below.

Tenders, enclosed in a plain sealed envelope endorsed "Tender for Piling Timber and Steelwork," must be received by the undersigned not later than 9 a.m. on MONDAY, 8th August, 1960.

S. VINCENT ELLIS,  
Clerk of the Board.

The Cedars,  
Albermarle Road,  
Norwich, NOR 8TE.  
14th July, 1960.

**BLACKBURN AND DISTRICT HOSPITAL MANAGEMENT COMMITTEE.****MANCHESTER REGIONAL HOSPITALS.****TENDERS FOR PAINT.**

TENDERS are invited for the SUPPLY of approx. 20,000 gallons of PAINT to various Hospital Management Committees in the Manchester Region for a period of 12 months from 1st October, 1960. Forms of Tender may be obtained from the Secretary of the Committee, Royal Infirmary, Blackburn, to whom they should be returned in the special envelope provided so as to reach him not later than 10 a.m. on 18th AUGUST, 1960.

The Blackburn and District Hospital Management Committee (acting on behalf of the other Management Committees concerned) reserve the right to accept the whole or part of any Tender submitted.

H. HARDING,  
Secretary.

**SHAKESPEARE'S BIRTHPLACE TRUSTEES AND GUARDIANS.****PROPOSED NEW LIBRARY AND ADMINISTRATIVE BLOCK—  
HENLEY STREET, STRATFORD-ON-AVON.**

Bills of Quantities and TENDER documents for the ABOVE PROJECT will be available on the 8th SEPTEMBER, 1960. Building contractors who wish to be considered for this project should forward their names to the Architects, MESSRS. WOOD AND KENDRICK AND WILLIAMS, of 57 Colmore Row, Birmingham, B3, not later than the 30th SEPTEMBER, 1960. From this list a selected number will be invited to tender, and the closing date for receipt of such Tenders will be 5th OCTOBER, 1960.

The project consists of a Precast and In-situ Ferro-concrete Frame clad with Stone and Brickwork calling for high-class finishes.

Any further information is to be obtained from the Architects at the above address.

## CONTRACTS

## COUNTY BOROUGH OF ST. HELENS.

ERCTION OF 24 BUNGALOWS—  
HOGHTON ROAD, SUTTON OAK, ST. HELENS.

The ST. HELENS CORPORATION invite TENDERS for the ERECTION and COMPLETION of 24 BUNGALOWS, in 12 pairs, built in Traditional Construction, sited fronting on to Hoghton Road, St. Helens.

Bills of Quantities and Forms of Tender may be obtained from the undersigned on the payment of £2 2s., which will be returned upon receipt of a bona-fide Tender.

Working Drawings and Conditions of Contract can be inspected at the Architectural Office, No. 5, Cotham Street, St. Helens.

Tenders must be delivered, sealed in the envelope provided, to the Town Clerk, Town Hall, St. Helens, not later than 9 a.m. on MONDAY, 22nd August, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

M. WARD, M.I.M.E., M.T.P.I.,  
Borough Engineer.

Town Hall,  
St. Helens.

## BOROUGH OF BANBURY.

## SOUTHAM ROAD SEWERAGE.

## CONTRACT NO. 3.

TENDERS, on a Fixed-price Basis, are invited for the CONSTRUCTION of A NEW SEWAGE PUMPING STATION at BANBURY, together with approx. 1,000 lin. yds. of CONCRETE and S.G.W. GRAVITY SEWERS from 24in. dia. to 21in. dia. and 1,100 lin. yd. of 14in. dia. ASBESTOS-CEMENT RISING MAIN.

The General Conditions of Contract, Specification and Bills of Quantities may be obtained from the Council's Consulting Engineers, MRSSRS. J. D. AND D. M. WATSON, MM.I.C.E., 67 Tufton Street, Westminster, London, S.W.1, on payment of a deposit of Ten Guineas, refundable only to contractors who submit bona-fide Tenders and return all documents and Drawings. Deposit cheques must be made payable to the County Council.

Sealed Tenders endorsed "Tender for Contract No. 3," should be submitted in a plain envelope to reach the undersigned not later than Noon on MONDAY, 22nd August, 1960.

FREDERICK G. BOYS,  
Town Clerk.

Municipal Buildings,  
Banbury.

## BOROUGH OF HIGHAM FERRERS.

ROAD IMPROVEMENT—  
CEMETERY LANE-VINE HILL DRIVE.

Road contractors desirous of TENDERING for the ABOVE CONTRACT are invited to submit their names to MR. W. H. PLUMMER, Borough Surveyor, Town Hall, Higham Ferrers, Northamptonshire, by not later than 22nd AUGUST, 1960, together with a deposit of £2 2s., which will be returned upon receipt of a bona-fide Tender.

Tenders on a Fixed-price Basis for Measure and Value Contracts will be based on Bills of Quantities which will be supplied in due course.

The lowest or any Tender will not necessarily be accepted.

(Signed) GEO. H. CRAPPER,  
Town Clerk.

Town Hall,  
Higham Ferrers,  
Northamptonshire,  
13th July, 1960.

## LLWCHWR URBAN DISTRICT COUNCIL.

## TENDERS are invited for the FOLLOWING

- (a) Construction of Estate Roads, Sewers and Water Mains at Loughor and Gowerton.
- (b) Erection of 17 Composite Blocks of Six Dwellings each at Loughor, Gowerton and Gorselinon.

Drawings, Specifications, Bills of Quantities and Form of Tender may be obtained from the Council's Architect on payment of a deposit of £2 2s. in respect of (a) and (b), which will be refunded on receipt of a bona-fide Tender or the return of the Contract documents.

Tenders, on the prescribed form, in the envelopes provided for this purpose, must be forwarded to reach me not later than Noon, MONDAY, 22nd August, 1960.

Tenders are to be on a Fixed-price Basis.  
Dated this 14th day of July, 1960.

EWART PATE,  
Clerk of the Council.

Council Offices,  
West Street,  
Gorseinon,  
Swansea.

## WITNEY RURAL DISTRICT COUNCIL.

## MAIN DRAINAGE OF NORTH LEIGH.

## W24/4—CONTRACT 1.

The Witney Rural District Council invite TENDERS from experienced contractors for the CONSTRUCTION of EXTENSIONS to the SEWAGE DISPOSAL WORKS, the LAYING of 9in. and 6in. SEWERS, and other ancillary works.

Particulars and Specifications may be obtained, drawings may be inspected at the offices of the Consulting Engineers, MRSSRS. HOWARD HUMPHREYS AND SONS, Victoria Station House, Victoria Street, Westminster, S.W.1, on and from THURSDAY, 21st July, 1960, until WEDNESDAY, 17th August, 1960, between the hours of 10 a.m. and 4 p.m., upon payment of a deposit of £2 2s. payable to the Witney Rural District Council for Three Guineas, which deposit, after the Council have received it, will be returned to each contractor who has submitted a bona-fide Tender which is not subsequently withdrawn. The contractor must have had considerable experience in similar works and be prepared to furnish good and approved security for the due execution of the Contract.

Tenders are to be on the official form and are to be delivered to the undersigned, in a sealed envelope endorsed "Tender for Main Drainage of North Leigh (W24/4 Contract 1)," but bearing no name or other mark indicating the sender, not later than Noon on WEDNESDAY, 24th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

ERNEST ROWLES,  
Clerk of the Council.

Rural District Council Office,  
Hillside,  
Witney, Oxon.  
JULY, 1960.

## SUPPLEMENT

## THE CONTRACT JOURNAL

## CONTRACTS

## LONDON COUNTY COUNCIL.

## LAMBETH PALACE ROAD DIVERSION—LAMBETH.

TENDERS are invited from contractors having experience of large-scale road construction for the DIVERSION of LAMBETH PALACE ROAD, including the Realignment of Addison Street and the Construction of Pedestrian Subways.

Form of Tender, Specification etc., and Drawings are obtainable from the Chief Engineer upon payment of £3 by crossed cheque or order made payable to the London County Council, which will be returned only on a bona-fide Tender is submitted and not subsequently withdrawn.

Contract and other relevant documents may be inspected on personal application at Room 450D, County Hall, before payment of fee. Remittance by post should be addressed to the Chief Engineer (B.C./1920/7), County Hall, Westminster Bridge, S.E.1.

No Tender received by the CLERK OF THE COUNCIL after 3 p.m. on MONDAY, 22nd August, 1960, will be considered.

The Council does not bind itself to accept the lowest or any Tender.

## STAFFORDSHIRE COUNTY COUNCIL.

## BIRMINGHAM-PRESTON MOTORWAY.

## STAFFORDSHIRE SECTION CONTRACTS.

The Council invites TENDERS for the CONSTRUCTION of ONE OR MORE of the FOLLOWING SECTIONS OF MOTORWAY:

Section B—Whitgreave to Beech (6½ miles, including 9 Bridges).

Section C—Beach to Keele (5½ miles, including 14 Bridges).

Section D—Keeler to Cheshire Boundary (7½ miles, including 20 Bridges).

The length of approx. 19 miles has been divided into three sections, with separate Contract documents for each section.

The work consists of Drainage, Excavation, Construction of Twin 36ft. Carriageways and Hard Shoulders, including Concrete Bridges of various types.

Copies of the Tender documents and Drawings may be obtained on application to the undersigned.

Applications for each section must be accompanied by a deposit of £50 which will be refunded upon receipt of a bona-fide Tender and the return of all Tender documents and Drawings.

Separate Tenders, in a plain sealed envelope and endorsed "Motorway Section 'B' (or 'C' or 'D')" must be delivered to the undersigned not later than 10 a.m. on the 20th SEPTEMBER, 1960.

The Council does not bind itself to accept the lowest or any Tender.

T. H. EVANS,  
Clerk of the County Council.

County Buildings,  
Stafford.

## BOROUGH OF SPENBOROUGH.

## PRIVATE STREET WORKS.

## FOUNTAIN STREET, ROBERTOWN.

TENDERS are invited for the MAKING-UP of FOUNTAIN STREET, Robertown (Carriageway area approx. 1,214 sq. yds.).

Copies of Contract documents from Borough Engineer and Surveyor, Spenborough Town Hall, Cleckheaton, on payment of £2 2s. deposit refunded on receipt of a bona-fide Tender.

Tenders to me, in plain sealed envelopes endorsed "Fountain Street," not later than Noon, 30th JULY, 1960.

K. H. CHORLTON,  
Town Clerk.

## HORNCastle RURAL DISTRICT COUNCIL.

## MAREHAM-LE-FEN SEWERAGE SCHEME.

## CONTRACT NO. 2—PUMPING PLANT.

TENDERS are invited for the PROVISION, ERECTION and MAINTENANCE at Mareham-le-Fen of TWO VERTICAL SPINDLE PUMPS each capable of pumping coarsely screened sewage at a rate of 104 gallons per minute, complete with Electric Motors, Starters and Accessories.

Persons manufacturing and wishing to tender should apply for the documents and Drawings to the Council's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, Belmont House, 20 Wood Lane, Headingley, Leeds, 6, enclosing a deposit cheque value Three Guineas made payable to the Horncastle R.D.C., subject to deposit to be returned on receipt of a bona-fide Tender and the return of all documents.

Tenders are to be submitted to the undersigned, in plain sealed envelopes marked "Pumping Plant," not later than 12 Noon on WEDNESDAY, the 10th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

N. G. GOLDHAM,  
Clerk of the Council.

Council Offices,  
6 Conging Street,  
Horncastle,  
Lincs.

## POCKLINGTON RURAL DISTRICT COUNCIL.

## MELBOURNE SEWERAGE SCHEME.

TENDERS are invited for the FOLLOWING:

CONTRACT No. 1.—The Construction of approx. 2,000 yds. of 6in. dia. Concrete Pipe Sewers: 2,000 yds. of 4in. dia. Spun-Iron Mains; together with two Elector Stations at Melbourn; and Remedial Works at the nearby Disposal Works in the Pocklington Rural District of East Yorkshire.

CONTRACT No. 2.—The Supply and Erection at Melbourn of Four 50 g.p.m. Sewage Electors all complete with Electric Motors, Starters and Accessories.

Contractors wishing to tender should apply for the documents and Drawings to the Council's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, Belmont House, 20 Wood Lane, Headingley, Leeds, 6, enclosing a deposit cheque value Three Guineas in respect of each Contract, made payable to the Pocklington R.D.C., such deposit to be refunded upon receipt of a bona-fide Tender and the return of all the documents and Drawings.

Tenders with the Bills of Quantities priced in ink are to be submitted to the undersigned not later than 12 Noon on the 19th AUGUST, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

J. STANLEY BROWN,  
Clerk of the Council.

Council Offices,  
Grove House,  
Pocklington,  
York.

13th July, 1960.

## CONTRACTS

## NORTHUMBERLAND COUNTY COUNCIL.

## COUNTY SURVEYOR'S DEPARTMENT.

## SUPPLY AND LAYING OF HOT ROLLED ASPHALT.

TENDERS are invited for the SUPPLY and LAYING of approx. 120,000 sq. yd. of HOT ROLLED ASPHALT on various sections of ROADS in the County of Northumberland.

Form of Tender, Specifications and Bills of Quantities may be had on application to the County Surveyor, Phoenix House, Queen Street, Newcastle upon Tyne.

Applications for Tender Forms should reach the above address by 9 a.m. on the 1st AUGUST, 1960.

E. P. HARVEY,  
Clerk of the County Council.

## METROPOLITAN BOROUGH OF WANDSWORTH.

## WINDOW CLEANING.

TENDERS invited for WINDOW CLEANING at (a) the Council's HOUSING ESTATES; and (b) the Council's PUBLIC LIBRARIES.

Details and Forms of Tender obtainable from me, to whom Tenders must be delivered by 10 a.m. on 3rd AUGUST, 1960.

J. NOEL MARTIN,  
Town Clerk.  
Metropolitan Buildings,  
Wandsworth, S.W.18.

## BOROUGH OF ENFIELD.

## PUBLIC LIGHTING IMPROVEMENTS—1960 SCHEME.

The COUNCIL invites TENDERS as FOLLOWS.—

SECTION A.—From manufacturers for the Supply and Delivery of about:

316 Lanterns for 60-Watt Integral Jacketed Sodium Vapour Lamps, complete with Control Gear and Lamps.

181 Lanterns for 60-Watt Integral Jacketed Sodium Vapour Lamps, with Control Gear and Lamps.

SECTION B.—From manufacturers for the Supply and Delivery of about:

316 Prestressed or Normally Reinforced Concrete Columns and Brackets (25ft. mounting height), which must comply with B.S. 1308: 1957 and bear the Certification Mark of the British Standards Institution.

181 Prestressed or Normally Reinforced Concrete Columns and Brackets (15ft. mounting height), complying with B.S. 1308: 1957 and bearing the B.S. Certification Mark.

SECTION C.—For the Erection of Columns, Brackets and Lanterns and Removal of existing Concrete, Steel and Cast-Iron Columns.

The Specification, Bills of Quantities, Conditions of Contract and Forms of Tender for one or more of the contracts may be obtained from Mr. H. D. PEAKE, M.Sc.(Eng.), M.I.C.E., Borough Engineer and Surveyor, 7 Little Park Gardens, Enfield, Middlesex, upon payment of £2 deposit, refundable upon receipt of a bona-fide Tender and/or the return of all the documents.

The above documents and Plans may be inspected at the Borough Engineer's Office without charge during office hours (excluding Saturdays).

Tenders must reach the undersigned not later than MONDAY, 22nd AUGUST, 1960, and no Tender will be received except in the official tender envelope, sealed and endorsed "Tender for Street Lighting Improvements—1960 Scheme." The tender envelope shall not bear any mark or name indicating the sender.

Tenders should note that the Council does not bind itself to accept the lowest or any Tender.

CYRIL E. C. R. PLATTEN,  
Town Clerk.

## CITY OF ST. ALBANS.

## REPAINTING OF STREET LAMP COLUMNS.

TENDERS are invited for the REPAINTING of 168 GROUP "A" TYPE METAL STREET LAMP COLUMNS in the CITY OF ST. ALBANS.

Copies of the Conditions of Contract, Specification and Form of Tender may be obtained from the City Engineer and Surveyor's Office, 16 St. Peter's Street, St. Albans.

Tenders, in plain sealed envelopes endorsed "Repainting of Street Lamp Columns," to be delivered to the undersigned before 12 Noon on WEDNESDAY, 3rd August, 1960.

B. V. ENTWISTLE,  
Town Clerk.

## CHESTERTON RURAL DISTRICT COUNCIL.

## STREET LIGHTING CONVERSION AND IMPROVEMENT SCHEME.

The Council invites FIXED-PRICE TENDERS from experienced Street Lighting Contractors for the CONVERSION and IMPROVEMENT of STREET LIGHTING and the DISMANTLING of the GAS LIGHTING INSTALLATIONS in Seven PARISHES. The contract comprises the supply and erection of:

(a) Approx. 260 15ft. mounting height Concrete Columns with 60-Watt Sodium Discharge Lamps and Lamps.

(b) Approx. 95 15ft. mounting height Concrete Columns with 100-Watt Tungsten Lamps and Lamps.

(c) The Conversion of approx. 320 Cast-Iron Lamp Columns in use with 100-Watt Tungsten Lamps and Lamps.

(d) The Dismantling and Removal of the existing Gas Lighting Installations.

The Specification and Bills of Quantities may be obtained from the Engineer and Surveyor, County Hall, Hobson Street, Cambridge, on receipt of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn, and the return of all the documents.

The Drawings and General Conditions of Contract may be inspected at the Office of the Engineer and Surveyor.

Tenders, in envelopes provided, should be delivered to the undersigned not later than Noon on TUESDAY, the 16th August, 1960.

The Council does not bind itself to accept the lowest or any Tender.

W. H. HAYWARD,  
Clerk to the Chesterton  
Rural District Council.

County Hall,  
Hobson Street,  
Cambridge,  
12th July, 1960.

## CONTRACTS

COUNTY BOROUGH OF SWANSEA.  
SKETTY PARK HOUSING SITE—PART II.

The CORPORATION invites FIXED PRICE TENDERS for the FOLLOWING ROAD and SEWER WORKS in connection with the ABOVE HOUSING SITE.

The works comprise the following quantities: Site Excavation, 17,000 cu. yd.; Concrete Roadways, 6,800 sq. yds.; Paved Roads, 9,000 sq. yds.; Surface Water Drains, 21in. Surface Water Sewers, 3,100 lin. yds.; 6in./24in. Full Water Sewers, 2,400 lin. yds.

The Drawings may be inspected at the Office of the Borough Engineer and Surveyor, The Guildhall, Swansea, from whom copies of the Condition of Contract, Specification, Bills of Quantities and Form of Tender may be obtained on deposit of the sum of £5, which will be returned to bona-fide tenderers.

Tenders, in plain sealed envelopes not bearing any name or mark indicating the sender, addressed to the undersigned and endorsed "Tender for Sketty Park Housing Site—Part II," should be delivered or sent by Registered Post, so as to reach me not later than MONDAY, 22nd August, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

IORWERTH J. WATKINS,  
Town Clerk.

The Guildhall,  
Swansea,  
July, 1960.

BOROUGH OF ILFORD.  
THREE-STORY FLATS—THE GLADE, ILFORD.

The CORPORATION invite FIRM-PRICE TENDERS for the ERECTION of TWO BLOCKS of 12 ONE-BEDROOM FLATS and FOUR BLOCKS of 12 TWO-BEDROOM FLATS.

Drawings and Conditions of Contract may be inspected and Bills of Quantities and Form of Tender obtained from the Borough Engineer, Town Hall, Ilford, upon written application and payment of a deposit of £5 3s. which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes, endorsed "Tender—72 Flats—The Glade, Ilford," but not bearing any name or mark indicating the sender, must be delivered to the TOWN CLERK, Town Hall, Ilford, not later than 4 p.m. on TUESDAY, 23rd August, 1960.

## BOROUGH OF BACUP.

## STREET LIGHTING EQUIPMENT—MAIN ROADS.

TENDERS are invited for the SUPPLY, DELIVERY and ERECTION of STREET LIGHTING EQUIPMENT on TODMORDEN ROAD and BOOTH ROAD—approx. length 1 1/2 miles, 1 1/2 miles, respectively.

Specifications, Bills of Quantities and Forms of Tender, may be obtained from me on payment of a deposit of £2 2s., returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Street Lighting Equipment," to be delivered to me at GATESHEAD, 1980.

The Council do not bind themselves to accept the lowest or any Tender.

A. D. BOND,  
Town Clerk.

BOROUGH OF ALTRINCHAM.  
ASPHALT SURFACING TO CARRIAGeway.

## MANCHESTER ROAD, A.56.

TENDERS are invited from contractors experienced in such work, for EXCAVATING in EXISTING CARRIAGeway, and RESURFACING of approx. 1,400 sq. yd. of CARRIAGeway in MANCHESTER ROAD, in TWO-COAT HOT ROLLED ASPHALT conforming to B.S.S. No. 5000, 1958.

Specification, Bills of Quantities and Form of Tender may be obtained from the Office of the Borough Surveyor, Town Hall, Altrincham.

No variation of price will be allowed in respect of either labour costs or costs of materials.

Tenders must be enclosed in a plain sealed envelope endorsed "Tender for Resurfacing of Manchester Road," but shall not bear any name or mark indicating the sender, and delivered to the undersigned not later than 12 Noon on SATURDAY, 13th August, 1960.

The Council does not bind itself to accept the lowest or any Tender.

E. GRAHAM THOMAS,  
Town Clerk.

Town Hall,  
Altrincham,  
July, 1960.

## PENISTONE RURAL DISTRICT COUNCIL.

## INGBIRCHWORTH SUPPLY—CONTRACT "B."

The COUNCIL invites TENDERS for the LAYING of a 4in. dia. ASBESTOS-CEMENT PIPELINE about three-quarters of a mile in length along the Main Road (A.629) through Ingbirchworth.

The work consists of the Excavation of Trench, Laying and Jointing Asbestos-cement Pipes with Detachable Joints, Refilling of Trenches and Restoring Soil, together with the Fixing of Valves in connection therewith, Hydrants and necessary Chambers, etc.

Plans and Drawings may be seen, and the General Conditions, Specification and Form of Tender obtained, on application to G. H. HILL AND SONS (MANCHESTER), Civil Engineers, 51 Mosley Street, Manchester, 2, upon deposit of a deposit for Five Guineas. This sum will be returned to the tenderer provided that he shall have submitted a bona-fide Tender and shall not have withdrawn the same.

Copies of the Drawings are available, and if the tenderer so desires, will be supplied to him on payment of the sum of Ten Shillings and Sixpence, which will not be refunded.

Alternatively, documents and Drawings may be inspected at Council Offices, Thurstone, near Sheffield, Yorkshire.

Separate cheques should be sent, made payable to G. H. Hill and Sons (Manchester), Ltd., Sealed Tenders, endorsed "Tender for Pipeline 4in. dia. through Ingbirchworth—Contract 'B,'" and addressed to the Clerk to the Council, must be delivered to the Council Offices, Thurstone, near Sheffield, Yorkshire, not later than 17th AUGUST, 1960.

The Council does not bind itself to accept the lowest or any Tender.

J. HODGKINSON,  
Clerk to the Council.

Council Offices,  
Thurstone,  
Near Sheffield,  
Yorkshire,  
13th July, 1960.

## CONTRACTS

## NORTHAMPTONSHIRE COUNTY COUNCIL.

NORTHAMPTON-BANBURY ROAD, B.4525.  
FOOTBRIDGE AT KISLINGBURY.

TENDERS are invited for the ERECTION of a THREE-SPAN PRECAST CONCRETE FOOTBRIDGE 133ft. long over the RIVER NENE at Kislingbury, adjacent to the Northampton-Banbury Road, B.4525.

The work will comprise the Construction of the Piles and Footbridge Units, together with ancillary items; the Driving of Precast Concrete Capping Beams, and the Erection of Three Precast Prestressed Concrete Footbridge Units, together with Ancillary Parapet Fencing Work.

The Piles and Footbridge Units will be supplied and delivered to the site by the County Council.

Tender documents may be obtained from the County Surveyor, County Offices, Guildhall Road, Northampton, on deposit of a sum of £2, which will be refunded on receipt of a bona-fide Tender and the return of all documents. The Drawings may be examined at the County Surveyor's Office during normal office hours.

Tenders, in plain sealed envelopes endorsed "Tender for Kislingbury Bridge," must be returned to the undersigned not later than MONDAY, the 8th August, 1960.

J. ALAN TURNER,  
Clerk to the County Council.

County Hall,  
Northampton.

## BOROUGH OF NEWBURY.

## BATH ROAD HOUSING ESTATE—PART 3.

## KERBING AND FOOTPATHS.

TENDERS are invited for the ABOVE, comprising approx. 1,100 lin. yds. of KERRING and 2,380 sq. yds. of ASPHALT FOOTPATH with PRECAST CONCRETE EDGING, VERGES, and ancillary works.

Form of Tender, Specification and Bill of Quantities may be obtained from the Borough Surveyor, Municipal Buildings, Newbury, at whose Office Plans and General Conditions may be inspected.

Second Tender, "Tender for Bath Road Estate Completion Works," must be delivered to the undersigned not later than WEDNESDAY, 17th August, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

LESLIE SOUTHERN,  
Town Clerk.

## CITY OF BIRMINGHAM.

## TO PUBLIC WORKS CONTRACTORS.

The PUBLIC WORKS COMMITTEE invite TENDERS on a Fixed-price Basis for a Measure and Value Contract for the CONSTRUCTION of REINFORCED CONCRETE VEHICULAR and PEDESTRIAN SUBWAYS, RETAINING WALLS, and ancillary works, in connection with the SECOND SECTION of THE NEWBURY ROAD, STEELHOUSE LANE, Birmingham, 4.

The Conditions of Contract (which include the Corporation's usual Fair Wages and Conditions of Labour Clause) and the Drawings may be Inspected, and the Specification, Bills of Quantities and Form of Tender obtained, on payment of £25, at the Office of SIR HERBERT J. MANZONI, City Engineer and Surveyor, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. The deposit will be returned on receipt of a bona-fide Tender. Tenders, enclosed in the envelope provided for the undersigned, must be sealed and delivered to the Town Clerk, One (Row No. B.21), not later than Noon on MONDAY, 15th August, 1960, when they will be opened. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,  
Town Clerk.

Council House,  
Birmingham, 1.

## URBAN DISTRICT COUNCIL OF KIRKBY-IN-ASHFIELD.

## PUMPING MACHINERY AND ELECTRICAL GEAR AT SEWAGE DISPOSAL WORKS.

TENDERS are invited for the MANUFACTURE and COMPLETE INSTALLATION of TWO 20 c.f.m. and ONE 35 c.f.m. SEWAGE PUMPS, and ONE 35 c.f.m. SUBMERSIBLE PUMPS, all electrically driven, complete with Starters, Switchgear, Steel Frame, Site Distribution Cables, etc.

Tender documents are obtainable from MESSRS. W. H. RADFORD AND SON, 57 Goldsmith Street, Nottingham, on receipt of a crossed cheque for Three Guineas payable to the Kirkby-in-Ashfield U.D.C. The deposit will be returnable when a bona-fide Tender has been submitted and documents have been returned.

Tenders, in plain sealed envelopes, endorsed "Tender for Contract K.S.," are to be delivered to the undersigned not later than 12 Noon on THURSDAY, 1st September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

E. J. THOMAS,  
Clerk of the Council.

Public Offices,  
Kirkby-in-Ashfield,  
Nottingham.

12th July, 1960.

## BANSTEAD URBAN DISTRICT COUNCIL.

## KERBING, FOOTPATH AND SURFACE WATER DRAINAGE WORKS.

TENDERS are invited for the ABOVE-MENTIONED WORKS which will be carried out in a number of roads within the District.

The work will comprise the CONSTRUCTION of a REINFORCED CONCRETE BUS LAY-BY with Tarmac, Footpath and Construction of Soakaways, and various ancillary works.

Specifications and Bills of Quantities may be obtained from, and Conditions of Contract and Drawings may be Inspected at, the Office of the Engineer and Surveyor, on payment of a deposit of £2, returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Tender for Roadworks—Classified Roads," must be returned to the undersigned not later than TUESDAY, the 16th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. L. SHAW,  
Clerk of the Council.

The Council House,  
Banstead, Surrey.

10th July, 1960.

## CONTRACTS

STAFFORDSHIRE COUNTY COUNCIL.  
COUNTY ROADS.

## TENDERS FOR SNOW FENCING.

The County Council invite TENDERS for SNOW FENCING.

Conditions and Form of Tender, etc., may be obtained by application to the County Surveyor, County Buildings, Stafford.

Tenders are to be submitted to reach the undersigned, in official envelope provided, not later than First Post on THURSDAY, 11th August, 1960.

T. H. EVANS,  
Clerk of the County Council.

County Buildings,  
Stafford,  
July, 1960.

STAFFORDSHIRE COUNTY COUNCIL.  
COUNTY ROADS.

## TENDERS FOR WOODEN HUTS.

TENDERS are invited or the SUPPLY of WOODEN HUTS mounted on wheels fitted with pneumatic tyres.

Details and Form of Tender can be obtained by application to the County Surveyor, County Buildings, Stafford.

Tenders to be submitted to reach the undersigned, in official envelope provided, not later than First Post on FRIDAY, 12th August, 1960.

T. H. EVANS,  
Clerk of the County Council.

County Buildings  
Stafford  
July, 1960.

## BOROUGH OF SALTASH.

## TENDERS are invited for the LAYING of approx. 580 lin. yds. 25lin. yd. 33lin. yd. 31lin. yd. SPUN IRON WATER MAIN at CALLINGTON ROAD, Saltash.

Drawings and Conditions of Contract may be seen, and Bills of Quantities and Form of Tender obtained, on application to the Borough Surveyor, Mr. A. BARR, A.M.I.C.E., M.I.M.E., Church House, Saltash.

A deposit of Two Guineas in the form of a crossed cheque is required, which will be returned on receipt of a bona-fide Tender.

The Council is not bound to accept the lowest or any Tender.

Tenders, in sealed envelopes which must not bear any name or mark indicating the sender, and endorsed "Tender for Callington Road Trunk Main," to be sent to the undersigned to arrive not later than Noon on TUESDAY, 30th August, 1960.

A. GORDON BELLINGHAM,  
Town Clerk.

Church House,  
Saltash,  
13th July, 1960.

## CITY OF LINCOLN.

## TRANSPORT REST ROOM, OFFICE AND TWO FLATS.

FIXED-PRICE TENDERS are invited for the ERECTION of the ABOVE, the construction of which is to be Load-Bearing Cavity Walls with Concrete Floor Beams and Flat Roof.

Plans and Conditions of Contract may be examined at, and Bills of Quantities, explanatory Drawing and Form of Tender obtained from, the City Architect, R. R. ALEXANDER, F.R.I.B.A., M.T.P.I., Stamford End, Lincoln, on payment of deposit of Two Guineas (cheque made payable to the Lincoln Corporation) which will be refunded on receipt of a bona-fide Tender, including relevant documents.

Tenders, on the prescribed form, in the plain envelope supplied, bearing no name or mark indicating the sender, must be delivered sealed, to the undersigned, on the 15th AUGUST, 1960, endorsed "Tender for Transport Rest Room, Office and Two Flats."

The Council do not bind themselves to accept the lowest or any Tender.

J. HARPER SMITH,  
Town Clerk.

Town Clerk's Office,  
Saltergate,  
Lincoln.

## CITY OF SALFORD.

## SUPPLY OF FENCING AND GATES.

TENDERS are invited for the SUPPLY and DELIVERY of WROUGHT-IRON FENCING for the BROWNSHOT CENTRE, WILMUR AVENUE, Salford, 7, in accordance with plans to be obtained from the Director of Parks, Belle Vue Park, Salford, 6.

Tenders, in sealed envelopes addressed to the Chairman, Health Committee, Town Hall, Salford, 3, and endorsed "Fencing and Gates—Brownshtor Centre," should be forwarded to arrive not later than 6th AUGUST, 1960.

R. RIBBLESDALE THORNTON,  
Town Clerk.

## CITY OF BIRMINGHAM.

## TO BUILDING CONTRACTORS.

## CONTRACT 715—14 ONE- AND TWO-STORY DWELLINGS — WOODCOCK LANE, NORTH FIELD.

## CONTRACT T.50/17—TENANTS' MEETING ROOM—HOLLOWAY, LEY HILL ESTATE, NORTHFIELD.

The HOUSEBUILDING COMMITTEE invite FIRM-PRICE TENDERS for the ERECTION of the ABOVE.

Bills of Quantities and Forms of Tender will be forwarded on payment of £2 2s. for each Contract at the Office of A. G. SHEPPARD FIDLER, City Architect, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. Applications should be made by 6th JULY, 1960. Conditions of Contract (which include the usual Fair Wages and Conditions of Labour Clause) may be seen at the City Architect's Office during normal working hours.

The deposits will be returned on receipt of bona-fide Tenders or on notification of inability to tender, together with the return of the documents not later than three days before the date for receipt of Tenders.

Tenders, enclosed in the envelope provided for the purpose, must be sealed and delivered to the Town Clerk's Office (Room No. B.31), Council House, Birmingham, 1, not later than 12 Noon on FRIDAY, the 10th August, 1960. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,  
Town Clerk.

Council House,  
Birmingham, 1.

July 21 1960

## CONTRACTS

## EAST RIDING OF YORKSHIRE COUNTY COUNCIL.

TENDERS are invited for the SUPPLY of (a) ROADSTONE and CHIPPINGS; (b) GRAVEL and SAND during the year ending 30th September, 1961. Applications for Forms of Tender should be made to the County Surveyor, County Hall, Beverley. No Tender will be accepted unless delivered to the tenderer not later than 4 p.m. on **MONDAY, 15th August, 1960**, in a plain sealed envelope to be provided by the County Council, endorsed "Tender for \_\_\_\_\_," and bearing no name or mark indicating the sender.

The Council do not bind themselves to accept the lowest or any Tender.

THOMAS STEPHENSON,  
Clerk of the County Council.  
County Hall,  
Beverley.

BOROUGH OF BOSTON.  
ERCTION OF SWIMMING BATHS.

TENDERS are invited for the ERECTION of OPEN-AIR SWIMMING BATHS at ROWLEY ROAD, Boston.

Plans, Conditions, Specifications and Forms of Tender may be obtained from the Borough Engineer and Surveyor, on payment of £2 2s., which will be refunded on receipt of a bona-fide Tender which is not subsequently withdrawn, and the return of the Plans and documents, to the Borough Engineer and Surveyor, under separate cover.

Tenders, in plain sealed envelopes endorsed "Private Bath," must be received by the undersigned by Noon on the 20th AUGUST, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

C. L. HOFFROCK GRIFFITHS,  
Town Clerk.  
Municipal Buildings,  
Boston, Lincs.

BOROUGH OF CHATHAM.  
RECONSTRUCTION OF NEW ROAD AVENUE, A.2.  
STAGE 2.

TENDERS are invited for the RECONSTRUCTION and SURFACING in HOT ROLLED ASPHALT of approx. 3,000 super. yd. of CARRIAGeway, together with ancillary works, at NEW ROAD AVENUE, Chatham.

Tender documents may be obtained on payment of a deposit of Two Guineas, from MR. J. A. T. RICHARDSON, Borough Engineer and Surveyor, Town Hall, Chatham.

Tenders should be returned in a plain sealed envelope endorsed "Tender for New Road Avenue Reconstruction—Stage 2," to reach the Town Clerk, Town Hall, Chatham, not later than Noon, SATURDAY, 13th August, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

ROWLAND NEWNES,  
Town Clerk.  
Town Hall,  
Chatham.  
13th July, 1960.

## CITY AND COUNTY OF NEWCASTLE UPON TYNE.

The HOUSING COMMITTEE of the CORPORATION are prepared to receive TENDERS for the ERECTION of the FOLLOWING DWELLINGS:

- (a) Shieldfield Redevelopment Area — 48 Maisonnnettes in Four-storey Blocks, and Ell Garages.
- (b) Walker Redevelopment Area — 108 Maisonnnettes in Four-storey Blocks, 45 Houses and 54 Garages.
- (c) Newbiggin Hall Estate, Group 15—125 Houses, 12 Flats in Two Stores, and 63 Garages.

Bills of Quantities and Forms of Tender may be obtained on application in writing to the City Architect, 18 Cloth Market, Newcastle upon Tyne, 1, where Plans and Conditions of Contract may be seen. Contractors must state in their applications the Contract(s) for which they desire to tender.

Sealed Tenders must reach the City Architect not later than 10 a.m. on WEDNESDAY, the 31st August, 1960. No Tender will be received except in the official envelope, which must bear any name or mark indicating the sender.

The Committee do not bind themselves to accept the lowest or any Tender.

JOHN ATKINSON,  
Town Clerk.  
Town Hall,  
Newcastle upon Tyne, 1.  
14th July, 1960.

## CITY OF MANCHESTER.

TENDERS are invited for the SUPPLY of ELECTRIC LAMPS during the period 1st November, 1960, to 31st October, 1961.

Tender Forms, returnable by 2nd AUGUST, 1960, from the CITY SURVEYOR, Town Hall, Manchester, 2.

## THE TEES VALLEY AND CLEVELAND WATER BOARD.

## BALDERHEAD IMPOUNDING RESERVOIR.

Contract documents are now being prepared by the Board's Consulting Engineers, MESSRS. EDWARD SANDEMAN, KENNARD AND PARTNERS, of Westminster, for the CONSTRUCTION at BALDERHEAD, on the River Balder, near Romaldkirk, North Riding of Yorkshire, of an EARTH RESERVOIR EMERGENCY approx. 155ft. high and 3,000ft. long at the crest containing approx. 2,300,000 cu. yd. of fill. The Concrete Cut-off Trench is expected to reach a depth of 100ft. or thereabouts, and its volume will be approx. 50,000 cu. yd.

The ancillary works will include 14ft. internal dia. Tunnels, Bellmouth Overflow Shaft, Valve Shaft etc. and associated structures. Tenders for the Construction of this Reservoir from selected contractors. Contractors wishing to be considered for inclusion in the list of those invited to tender should therefore apply to the undersigned in writing not later than the 1st SEPTEMBER, 1960.

Applicants must indicate what recent works of a similar nature they have carried out, giving the approx. costs and the names of Engineers to whom reference may be made. Applicants must also state their financial capacity to carry out the work.

Construction is anticipated to commence in the Spring of 1961.

E. A. MORRIS,  
Clerk of the Board and Chief Executive Officer.

G.P.O. Box No. 60,  
Water Board Offices,  
Corporation Road,  
Middlesbrough,  
18th July, 1960.

## THE CONTRACT JOURNAL

## CONTRACTS

## LANCASHIRE COUNTY COUNCIL.

TENDERS are to be invited from contractors for DEVELOPMENT of PLAYING FIELDS and ERECTION of SECONDARY SCHOOL, WEEETWOOD BAILEY COUNTY SECONDARY SCHOOL.

Applications for documents to tender must be received by the COUNTY ARCHITECT, P.O. Box 26, County Hall, Preston, not later than 3rd AUGUST, 1960, quoting Ref. A/C.

## COUNTY BOROUGH OF BOURNEMOUTH.

## BOROUGH ENGINEER'S DEPARTMENT.

## SEWAGE DISPOSAL WORKS, HOLDENHURST CONTRACT NO. 3.

TENDERS are invited for the PROVISION and ERECTION of Two 260-kw. DUAL FUEL ALTER-NATOR SETS and associated SWITCHGEAR. Form of Tender, etc., obtainable from Borough Engineer, Town Hall, Bournemouth.

Tenders to reach me by 20th AUGUST, 1960.  
A. LINDSAY CLEGG,  
Town Clerk.

## BOROUGH OF BEDDINGTON AND WALLINGTON.

TENDERS are invited for the RECONSTRUCTION of BEDDINGTON GARDENS, Wallington, comprising same 600yd. Kerb, Lowering Carrigeway and Surfacing in Macadam, Reconstructing Footways, and incidental works.

Application for Tender documents to the Borough Engineer, Town Hall, Wallington, Surrey. Closing date: 29th AUGUST, 1960.

A. B. BATEMAN,  
Town Clerk.

## CITY OF LEICESTER.

## PRIVATE STREET WORKS.

## CONTRACT NO. 22.

TENDERS are invited from contractors experienced in work of similar nature, for the REPAIR of NINE PRIVATE STREETS.

The work comprises Re-laying Slabbed Footways and Kerbing; Constructing New and Surfacing Existing Macadam Carrigeways and Footways; and other incidental work.

Full details and Form of Tender are obtainable from the undersigned upon receipt of One Guinea, which will be refunded upon the submission of a bona-fide Tender.

Tenders to be returned in the official envelope by 2.30 p.m. on THURSDAY, 18th August, 1960.  
JOHN L. BECKETT, M.I.C.E.,  
City Surveyor.

## URBAN DISTRICT COUNCIL OF KIDSBOURNE.

## HIGHWAYS ACT, 1959.

TENDERS are invited for the MAKING-UP of WOODSIDE AVENUE, Kidsbourne.

Specification, Bills of Quantities and Form of Tender may be obtained from, and Drawings inspected at, the Office of the Engineer and Surveyor, Town Hall, Kidsbourne, Staffs., on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Private Street Works," must be returned to the undersigned not later than Noon on THURSDAY, 28th July, 1960.

The Council do not bind itself to accept the lowest or any Tender.

O. LLOYD HURST,  
Clerk of the Council.

Town Hall,  
Kidsbourne, Staffs.

July, 1960.

## URBAN DISTRICT COUNCIL OF KIDSBOURNE.

## COALPIT HILL IMPROVEMENT (COMPLETION OF WORK).

TENDERS are invited for the IMPROVEMENT of a LENGTH of 55yd. of COALPIT HILL, Take.

The works comprise Excavation, the Erection of Retaining Walls in Stone-faced Concrete, Laying of Kerbs and Channels, Making-up Carrigeway in narrow widths, Fencing, and other ancillary works.

Tender documents may be obtained from the Engineer and Surveyor, Town Hall, Kidsbourne, Staffs., on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Coalpit Hill Improvement," are to be returned to the undersigned not later than Noon on THURSDAY, 28th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

O. LLOYD HURST,  
Clerk of the Council.

Town Hall,  
Kidsbourne, Staffs.

July, 1960.

## REPTON RURAL DISTRICT COUNCIL.

## PARISH OF TICKNALL.

## SEWERAGE AND SEWAGE DISPOSAL.

The above Council are prepared to receive TENDERS, on a Fixed-price Basis, from suitably experienced contractors for the LAYING of approx. 200ft. of 9in. and 6in. dia. SALT GLAZED WARE SEWERS, together with Manholes and House Connections; the CONSTRUCTION of a PUMPING STATION; the LAYING of approx. 600yd. of 8in. dia. CAST-IRON PUMPING MAIN, and the CONSTRUCTION of a SEWAGE DISPOSAL WORKS, comprising Balancing Tank, Settling Tank, Filters, Holes Tank, Stormwater Tank, Pumping Station, Sludge Bed, Sludge Storage Lagoon and attendant Pipework, Drains, Paths and Roads, etc., at TICKNALL, Derbyshire.

Drawings may be seen at the Offices of the Engineers, MESSRS. PICK, EVERARD, KEAY AND GIMSON, 6 Millstone, Wrexham, Clwyd, from whom Specification and Bills of Quantities may be obtained on payment of a deposit of Five Guineas which will be refunded on receipt of a bona-fide Tender.

Tenders, on the form supplied, are to be sent in the envelope provided, to the undersigned not later than 10 o'clock on the Forenoon of THURSDAY, the 25th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. BAILEY,  
Clerk of the Council.

Council Offices,

The Poplars,

Rolleston Road,

Burton-on-Trent.

## CONTRACTS

## MINISTRY OF TRANSPORT.

## TRAILER GRITTERS.

The Minister of Transport invites TENDERS for the SUPPLY of 60 BULK TRAILER GRITTERS.

Copies of the Specifications may be obtained from the Chief Mechanical Engineer, Ministry of Transport, Room 401, 21-37 Hereford Road, London, W.2.

Tenders should be submitted in plain sealed envelopes endorsed "Tender for Trailer Gritters," but not bearing any name or mark indicating the sender, and addressed to the Assistant Secretary, Ministry of Transport, 21-37 Hereford Road, London, W.2, to arrive not later than 4 p.m. on THURSDAY, 11th August, 1960.

The Minister does not bind himself to accept the lowest or any Tender.

G. D. HILL,

An Assistant Secretary.

## BOROUGH OF NELSON.

## PRIVATE STREET WORKS—SURREY ROAD.

TENDERS are invited for the MAKING-UP of SURREY ROAD, Nelson, comprising approx. 1,200 sq. yd. of CARRIAGeway, together with Flagged Footways, Verge Works, Surface Water Drainage, and other ancillary works.

Contract documents may be obtained from the Borough Engineer and Surveyor, Town Hall, Nelson, Lancashire, on deposit of £2 2s. (cheques payable to Nelson Corporation), returnable on receipt of a bona-fide Tender, not subsequently withdrawn.

General Conditions of Contract and Drawings may be inspected at the Borough Engineer's Office.

"Private Street Works—Surrey Road," should be delivered to the undersigned not later than Noon on TUESDAY, the 16th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. W. ROBERTS,

Town Clerk.

Town Hall,  
Nelson.  
11th July, 1960.

## CITY OF WORCESTER.

## ST. CATHERINE'S VALE REDEVELOPMENT.

## ADVANCE PREPARATION ROAD WORKS.

TENDERS are invited for the CLEARANCE of the SITE; the CLEAVING of approx. 60 in. sq. yd. of KERBS and CHANNELS; the CONSTRUCTION of approx. 380 sq. yd. of ROADWAY and approx. 150 sq. yd. of FOOTWAY; the PROVISION of TWO GULLIES and their Connection to the Sewer, together with appurtenant works in connection with the above.

Documents are obtainable from the City Engineer, 22 Bridge Street, Worcester, upon deposit of Two Guineas, returnable on receipt of a bona-fide Tender. Closing date: WEDNESDAY, 24th August, 1960.

BERTRAM WEBSTER,

Town Clerk.

## CITY OF BRADFORD.

## ERECTION OF 64 DWELLINGS.

TENDERS are invited for the ERECTION of 64 DWELLINGS with necessary Site Works at BRADFORD ROAD, CLAYTON, Bradford.

Drawings and Conditions of Contract may be examined at the Offices of the City Engineer and Surveyor, Town Hall, Bradford, 1.

Bills of Quantities and Form of Tender may be obtained from the above Office on payment of a deposit of Two Guineas returnable on receipt of a bona-fide Tender.

Tenders in plain sealed envelopes endorsed "Tender for 64 Dwellings at Clayton," together with Bills of Quantities priced in ink in separate envelope with tenderer's name thereon, are to be delivered to the undersigned by the 6th SEPTEMBER, 1960.

HENRY PATTEN,

Town Clerk.

## URBAN DISTRICT COUNCIL OF FELTHAM.

## FENCING—HANWORTH PARK.

TENDERS are invited for the PROVISION and ERECTION of approx. 1,420yd. of 6ft. high CORRUGATED STEEL PALE FENCING at Hanworth Park, Feltham.

Conditions of Contract may be inspected at the Office of, and a copy of the Form of Tender and Specification obtained on application to, the Engineer and Surveyor, Feltham Urban District Council, Lynton House, Hanworth Road, Feltham, Middlesex, upon payment of Two Pounds (£2), refundable on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes, must be enclosed in plain sealed envelope endorsed "Fencing—Hanworth Park," and delivered to the undersigned not later than 12 Noon on 11th AUGUST, 1960.

The Council does not bind itself to accept the lowest or any Tender.

M. W. COUPE,

Clerk of the Council.

Council Offices,  
Feltham, Middx.  
15th July, 1960.

## HALE URBAN DISTRICT COUNCIL.

## ERECTION OF SHOPS AND FLATS.

FIXED-PRICE TENDERS are invited for the ERECTION of ONE BLOCK of THREE SHOPS with FLATS over, on the DELAHAYS ROAD ESTATE.

Tendering documents and full information may be obtained from the Engineer and Surveyor, on payment of a deposit of £2, returnable on receipt of a bona-fide Tender, not subsequently withdrawn.

Tenders must be in plain sealed envelopes, endorsed "Tender—Shops," and reach me by 10th AUGUST, 1960.

R. W. HORSEALL,

Clerk of the Council.

Council Offices,  
Hale, Cheshire.

## MANCHESTER CORPORATION.

TENDERS invited for SUPPLY of ROOFING SLATES for 12 months ending 30th September, 1961.

Tender Forms, Specification and approx. requirements from DIRECTOR OF HOUSING, Purchasing Office, 324 Deansgate, Manchester, 3, returnable by 8th AUGUST, 1960.

## CONTRACTS

BOROUGH OF REDCAR.  
LEVELLING — TRUNK ROAD PLAYING FIELDS.

Contractors wishing to TENDER for THIS CONTRACT are requested to notify K. W. ASH, A.W.I.M.E., Borough Engineer, Ridley House, Coastguard Road, Redcar, together with a deposit of Two Guineas, to be returned on receipt of a bona-fide Tender, not subsequently withdrawn.

The contract comprises Stripping and Stacking of Top Soil, Excavation of Subsoil, Carting and Levelling Subsoil where required, and Relacement of Topsoil and its Cultivation and Sowing of the area.

Contract Drawings and Conditions of Contract may be inspected at the Office of the Borough Engineer during office hours.

The Council do not bind themselves to accept the lowest or any tender.

Tenders, in the envelope supplied, bearing no mark indicating the sender, and endorsed "Levelling—Trunk Road Playing Fields," must be received by the undersigned not later than Noon on FRIDAY, 12th August, 1960.

HUGH CALDWELL,  
Town Clerk.

Municipal Buildings,  
Redcar.

## PETERSFIELD URBAN DISTRICT COUNCIL.

## 12 OLD PEOPLE'S DWELLINGS—BARHAM ROAD / STATION ROAD, PETERSFIELD.

TENDERS are invited for the ERECTION of 12 OLD PEOPLE'S DWELLINGS at the ABOVE SITE. Tender documents may be obtained from J. THOMAS, A.M.I.C.E., Engineer and Surveyor, Town Hall, Petersfield, upon payment of £2 2s. which will be refunded on receipt of a bona-fide Tender, not subsequently withdrawn, or the return of the documents.

Tenders must be returned to the undersigned in a sealed envelope, endorsed "Old People's Dwellings," not later than Noon on WEDNESDAY, 24th August, 1960.

The Council do not bind themselves to accept the lowest or any tender.

H. H. CREEDON,  
Clerk of the Council.

Town Hall,  
Petersfield, Hants.  
15th July, 1960.

## LOUTH RURAL DISTRICT COUNCIL.

## NORTH COTES AND MARSHCHASE SEWERAGE SCHEME.

## CONTRACT NO. 1.

TENDERS are invited for the FOLLOWING—

- (1) The Construction of a new Sewage Treatment Works at North Cotes, comprising Balancing Tank, Dosing Chamber, Settlement Tank, Filter Beds, Human Tank, Sludge Beds, Sludge Pumping Station, Pipework, etc.
- (2) The Construction of approx. 2,600 lin. yd. of 6in. dia. Concrete Pipe Sewers, Manholes, etc., in North Cotes.
- (3) The Construction of approx. 2,950 lin. yd. of 6in. dia. Concrete Pipe Sewers, Manholes, etc., in Marshchase.
- (4) The Construction of Two Pumping Stations and 1,950 lin. yd. of Spun-Iron Rising Main.

Contractors wishing to tender for this work should apply to the Council's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, Belmont House, 20 West Lane, Headington, Oxford, OX3 7LS, enclosing a deposit of 10 guineas, payable to the Louth R.D.C., such deposit to be refunded on receipt of a bona-fide Tender and the return of all documents and Drawings.

Tenders, with the Bills of Quantities priced in, enclosed in an envelope bearing no indication of the name of the sender, and endorsed "Tender—North Cotes and Marshchase Sewerage Scheme," are to be submitted to the undersigned not later than 12 Noon on 22nd AUGUST, 1960.

The Council do not bind themselves to accept the lowest or any tender they may receive.

G. A. PITTS,  
Clerk of the Council.

Council Offices,  
Cannon Street,  
Louth, Lincs.  
15th July, 1960.

## WESSEX REGIONAL HOSPITAL BOARD.

## PARK PREWETT GROUP HOSPITAL MANAGEMENT COMMITTEE, NO. 10, BASINGSTOKE, HANTS.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED to Park Prewett Hospital during the six months commencing 1st October, 1960—

Contract Details

- (1) Malt Liquors.
- (2) Earthenware.
- (3) Leather and Dryery.
- (4) Boots and Shoes.
- (5) Paints and Varnishes.
- (6) Paints and Oils.
- (7) Oils—Engineering and Farm.
- (8) Petrol and Fuel Oils.
- (9) Hardware, Enamelware and Tinware.
- (10) Uniforms (Male Dressing Staff).

Forms of Tender will be supplied on written application, enclosing stamped addressed foolscap envelope, to the undermentioned. Tenders must be sent in sealed envelopes, addressed to the Group Secretary as below, marked "Tender for \_\_\_\_\_" and must be delivered by post or otherwise not later than 9 a.m. on 5th SEPTEMBER 1960.

FREDK. HALLES,  
Group Secretary.

Park Prewett Group Hospital Management Committee, Basingstoke, Hants.

STEELFIXING SUB-CONTRACTOR REQUIRED for site in N.E. England. Mainly repetition work on cages for prestressed units.

Write Box X.2364, "The Contract Journal."

MASON'S WORK on OFFER from August 1st in all London areas. Footway Laying and Granite Kerb Fixing.—Apply: FITZPATRICK AND SON (CONTRACTORS), LTD., 455 Old Ford Road, Bow, London, E.3.

TENDERS BY JOINT VENTURE.—Contractors unable to tender for large contracts owing to limited resources are invited to apply for acceptance to CONSORTIUM. The Consortium, formed into a separate company, will TENDER for LARGE-SCALE PROJECTS in Great Britain and possibly abroad. Write, giving brief outline of present and past activities, with emphasis on any specialised experience, plant and personnel, to Box X.2338, "The Contract Journal."

For Contracts received too late for classification see page 301

## APPOINTMENTS VACANT

SOMERSET COUNTY COUNCIL.  
ASSISTANT DIVISIONAL SURVEYORS (3).

APPLICATIONS are invited from suitably qualified Engineers for the ABOVE APPOINTMENTS at a salary within Range I (£610-£765) or Special Grade (£765-£870 per annum). The starting salary for exceptional candidates could be £950 per annum. These appointments offer a good opportunity for young Engineers to obtain practical experience of modern plant and methods of road construction, including study work and job planning.

Superannuable. Car allowance. Full particulars and forms may be obtained from the undersigned. Closing date—3rd AUGUST 1960.

J. H. H. WILKES,  
County Surveyor.

County Hall,  
Taunton.

## BOROUGH OF TOTTENHAM.

RESIDENT ENGINEER REQUIRED. Salary £1,265 p.a. Ed £1,420 p.a. inclusive. For supervision of construction of large-diameter concrete sewers, reinforced concrete culverts and manholes and sewer in tunnel.

In Application Form and particulars from BOROUGH ENGINEER, Town Hall, N.15 (CJ). Applications to be delivered by THURSDAY, 28th July, 1960.

## BOROUGH OF MANSFIELD.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING VACANCIES in the Borough Engineer and Surveyor's Department:

- (a) Two Senior Engineering Assistants—A.P.T. Grade IV (£1,065-£1,220).
- (b) One Engineering Assistant—Special Grade (£785-£1,070).
- (c) One Train-Draughtsman (Architectural and Civil Engineering) — General Division, £210-£595.

Commencing salary according to experience. Applications, stating age, training, qualifications, present and past appointments, experience, and names of three referees, should be sent to the Borough Engineer and Surveyor, Carr Bank, Mansfield, appropriately endorsed, not later than TUESDAY, 26th July, 1960.

Applicants for (a) must be Associate Members of the Institution of Civil Engineers or the Institution of Municipal Engineers, and for (b) must be suitably qualified.

The Council prefer that the successful applicant should live within the Borough after appointment. A house in service tenancy is available.

A. C. SHEPHERD,  
Town Clerk.

## BOROUGH OF WIMBLEDON.

WORKS SUPERINTENDENT REQUIRED. Grade A.P.T. III (£800-£1,065 p.a.) plus London Weighting.

Applicants should have had considerable experience in housing construction and maintenance, the maintenance of public buildings, and control and management of building labour.

Forms of Application, from BOROUGH ENGINEER AND SURVEYOR, Town Hall, Wimbledon, S.W.19, returnable by TUESDAY, 2nd August, 1960.

## BOROUGH OF GLOSSOP.

CONSTRUCTION OF NEW SEWERAGE WORKS.

## RESIDENT ENGINEER.

The Council invite APPLICATIONS for the POST of RESIDENT ENGINEER on the construction of about 900 lin. yd. of reinforced concrete pipe sewers varying in dia. from 30in. to 15in.; about 900 lin. yd. of asbestos-cement pipe sewers 15in. dia. in Glossop Brook; about 1,050 lin. yd. of spun-iron rising main, 14in. dia., with manholes and batch-bell chambers; and two sewage pumping stations; alterations and additions to the existing sewage disposal works, comprising demolition of existing units, conversion of existing sedimentation tanks to stormwater tanks, construction of a sludge pumping station, pipework, chambers, roads, paths, etc.; the construction of a new sewage pumping station over River Etherow; and the construction of a new sewage disposal works, comprising detritus channels, sedimentation tanks, main pumping station, proportioning chambers and bacteria beds, humus tanks, sludge pumping station, sludge digestors, sludge drying beds, laboratories and off-site network, chambers, roads, paths, and incidental works.

The period of this contract is two years, and the salary offered will be in accordance with Grade A.P.T. V (£1,220-£1,375 p.a.), the starting salary to be in accordance with qualifications and experience.

The successful applicant will work under the general direction of the Council's Consulting Engineers, MESSRS. A. H. S. WATERS AND PARTNERS, and must have had considerable experience on works of the nature described.

Applications, endorsed "Resident Engineer," stating age, experience and qualifications, accompanied by the names of two persons to whom reference may be made, must be forwarded to the undersigned not later than 10th AUGUST, 1960.

J. ARTHUR PUGH,  
Town Clerk.

Municipal Buildings,  
Glossop, Derbyshire.

## BOROUGH OF POOLE.

APPOINTMENT OF CLERK OF WORKS.

APPLICATIONS are invited for the APPOINTMENT in the new Borough Architect's Department at a salary of 16 guineas per week, in connection with a new Central Clinic and a continuing programme of works is likely to give opportunities in the future.

Applicants should have had considerable experience in building works.

Application Forms from Borough Architect, Municipal Buildings, Poole, Dorset, to be returned to the undersigned by the 27th JULY, 1960.

J. G. HILLIER,  
Town Clerk.

July, 1960.

## CITY OF MANCHESTER.

APPLICATIONS invited from persons with suitable qualifications and experience of the building trade for the POSITION of DIRECTOR of the MANCHESTER CORPORATION DIRECT WORKS ORGANISATION. Salary £3,500-£4,100 per annum.

Details of application and Application Forms (returnable by 28th JULY, 1960) from the TOWN CLERK, Town Hall, Manchester, 2.

## APPOINTMENTS VACANT

## CENTRAL ELECTRICITY GENERATING BOARD.

## NORTHERN PROJECT GROUP.

APPLICATIONS are invited from suitably qualified persons for the TEMPORARY APPOINTMENTS of INSTRUCTORS (CIVIL) for the duration of the site works at Thorpe Marsh Power Station Project, near Doncaster.

Salary within range £850-£1,130 p.a. N.I.C. Conditions of Service. The successful candidates will be responsible to the Board's Resident Engineer for the implementation of civil works undertaken by contractors. Experience in piling, foundations, shoring, reinforcement, and concrete mixing and placing is therefore essential.

Application Forms available from ADMINISTRATIVE OFFICER, Central Electricity Generating Board, Northern Project Group, Agarwood Road, Swinton, Pendlebury, Manchester, to be returned by 1st AUGUST, 1960, quoting Ref. N.53/C. Envelopes should be marked "Confidential—Staff Vacancy."

## MERIONETH COUNTY COUNCIL.

## HIGHWAYS AND BRIDGES DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING PERMANENT APPOINTMENTS in the County Surveyor's Department:

- (1) Assistant Engineer—Salary Grade A.P.T. IV (£1,065-£1,220).
- (2) Assistant Engineer—Salary Grade A.P.T. II (£1,065-£1,220).

Applications for appointment (1) should have had good experience in the design and preparation of road and bridge schemes, and be capable of supervising the actual works whether executed by contract or Direct Labour.

Preference will be given to candidates who are Associate Members of the Institution of Civil Engineers or Municipal Engineers.

Applicants for appointment (2) should have had experience in the design and preparation of road and bridge schemes.

Preference will be given to candidates who are suitably qualified and have had previous experience with the Authority.

Applications, with the Council's application forms, must be received by the COUNTY CLERK, County Offices, Dolgellau, not later than MONDAY, 8th August, 1960.

## COUNTY BOROUGH OF EAST HAM.

## SENIOR ASSISTANT ENGINEER (GENERAL)—GRADE III (£880-£1,065).

London Weighting is paid in addition. Salary in excess of the minimum may be paid according to qualifications and experience.

A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and Application Forms, returnable by 5th AUGUST, 1960, from the TOWN CLERK, Town Hall, E.6.

## METROPOLITAN BOROUGH OF ISLINGTON.

## BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited from persons not more than 50 years of age for the FOLLOWING APPOINTMENTS in the Permanent Staff:

- Three Engineering Assistants—Grade A.P.T. IV (£1,065-£1,220) plus appropriate London Weighting.

Applicants should have the Examination of the Institute of Civil Engineers or Municipal Engineers, or other appropriate qualification, and be suitably experienced.

Application Forms, returnable by First Post on MONDAY, the 15th August, 1960, obtainable from MR. C. N. COWNEY, Borough Engineer and Surveyor, Town Hall, Upper Street, N.1.

H. DIXON CLARK,  
Town Clerk.

## BEESTON AND STAPLEFORD URBAN DISTRICT COUNCIL.

## AMENDED ADVERTISEMENT.

APPOINTMENT OF RESIDENT ENGINEER AND ASSISTANT.

APPLICATIONS are invited for the ABOVE APPOINTMENTS in connection with a road widening scheme estimated to cost approx. £300,000:

RESIDENT ENGINEER, A.P.T. V (£1,220-£1,375).

ASSISTANT RESIDENT ENGINEER, A.P.T. II (£765-£880).

Applicants for the senior post must hold an appropriate Final Qualification and should have had previous experience in supervising large-scale road works carried out by contract. Commencing salary according to qualifications and experience.

Appointment is temporary for a period not exceeding 18 months. No assistance can be given with housing accommodation.

Applications, setting out details of qualifications and experience, together with the names of two referees, should be delivered to the Engineer and Surveyor, Town Hall, Beeston, Notts, not later than Noon on 6th AUGUST, 1960.

H. D. JEFFRIES,  
Clerk of the Council.

TOWN HALL,  
Beeston,  
Nottingham.

## CHEADLE AND GATLEY URBAN DISTRICT COUNCIL.

## HIGHWAYS DEPARTMENT FOREMAN.

APPLICATIONS are invited for the ABOVE POSITION from persons with a wide experience of all highway and sewer construction and maintenance, and labour supervision. Previous service with a local authority will be an advantage.

The salary will be within the Grade Misc. VI (£715-£775), and the position will be subject to the Local Government Superannuation Acts, the passing of a medical examination, and to one calendar month's notice on either side.

Applications, enclosed Foreman's Statement, stating age, previous appointments, and experience, and giving the names and addresses of two referees, must reach the undersigned not later than THURSDAY, 28th July, 1960.

RICHARD ROBERTS,  
Clerk of the Council.

Town Hall,  
Abney,  
Cheadle, Cheshire,  
11th July, 1960.

## APPOINTMENTS VACANT

## NATIONAL COAL BOARD.

## NORTH EASTERN DIVISION.

**CIVIL ENGINEERING ASSISTANT REQUIRED** at No. 1 Area Headquarters, Grimethorpe, near Barnsley.

Candidates should have professional experience in civil engineering. Experience in projects through the various stages from inception to completion, and of contract documents and administration of contracts is desirable. Duties include giving advice on the civil structural engineering aspects of surface installation and assistance in planning and reconstruction.

Salary £750-£1,150.

Apply, giving full details, to AREA STAFF MANAGER at above address by 30th JULY.

## COUNTY BOROUGH OF EAST HAM.

## ENGINEERING ASSISTANTS. A.P.T. I. SALARY UP TO £805 PER ANNUM.

Subsistence allowances may be granted over a reasonable period to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and Application Forms, returnable by 5th AUGUST, 1960, from the TOWN CLERK, Town Hall, East Ham, E.6.

## METROPOLITAN BOROUGH OF LEWISHAM.

**ASSISTANT REFEREE SUPERINTENDENT REQUIRED** Salary Scale A.P.T. II (£765-£880 p.a.) plus £40 p.a. London Weighting at age of 26 and over. Previous experience essential.

Form of Application and further particulars from the TOWN CLERK (Dept. J), Lewisham Town Hall, London, S.E.6.

Closing date: 30th JULY, 1960.

## HAYES AND HARLINGTON URBAN DISTRICT COUNCIL.

**BUILDER'S CLERK REQUIRED** by Hayes and Harlington U.D.C. within Clerical Division Grade II, i.e., £670-£765 per annum plus London weighting, up to 20 years, £15 per annum; 21-25 years, £25 per annum; 26 years and over, £40 per annum.

Candidates should possess a good knowledge of building construction and maintenance work, and have considerable experience in a similar capacity with a local authority or a building contractor. Experience in measuring-up for, and the operation of, incentive bonus schemes an advantage.

The working hours are those prevailing in the building industry, i.e., at present 44 hours per week.

The Council is unable to assist with the provision of clothing, bedding, etc.

Form of Application and further particulars and conditions of service obtainable from the undersigned, which when completed must be returned by 8th AUGUST, 1960.

GEORGE HOOPER,  
Clerk and Solicitor.

Town Hall,  
Hayes, Middx.

## NEWTON ABBOT URBAN DISTRICT COUNCIL.

## APPOINTMENT OF WORKS SUPERINTENDENT.

**APPLICATIONS** are invited for the ABOVE APPOINTMENT in the Engineer and Surveyor's Department at a salary in the A.P.T. Grade I, commencing at £615-£765 per annum.

Candidates must have had experience with a local authority including the following: Street clearing, sewerage and sewage disposal works, highway maintenance and construction, housing, repairs, street lighting, etc.

Housing accommodation will be available if necessary.

Candidates will be required to drive a van which is provided to help carry out the necessary duties. The appointment will be subject to the provision of the Local Government Superannuation Act, and the successful candidate will be required to pass a medical examination.

Applications, stating age and other particulars, qualifications (if any), experience, and previous appointments, should be forwarded to the Engineer and Surveyor, 18 Devon Square, Newton Abbot, accompanied by not more than three recent testimonials, not later than 12th AUGUST, 1960.

H. EVANS,  
Clerk of the Council.

Town Hall,  
Courtenay Street,  
Newton Abbot,  
15th July, 1960.

## MANCHESTER CORPORATION.

## APPLICATIONS are invited for the FOLLOWING POSTS:

(a) Senior Resident Engineer — A.P.T. V (£1,220-£1,375).

(b) Three Resident Engineers—Special Scale (£785-£1,070).

These posts are for the permanent staff and persons appointed will be required initially to supervise the construction of major engineering extensions at Manchester Airport.

Candidates must possess wide experience in the supervision of reinforced concrete design work and, in addition, for post (a), experience will be given to applicants who have had previous experience in controlling a small team of resident engineers engaged on the supervision of several civil engineering contracts.

Housing accommodation and removal expenses. Applications, stating age, education, qualifications and experience, and previous appointments, and details of posts held, together with the names of three referees, to the CITY SURVEYOR, Town Hall, Manchester, 2, by 8th AUGUST, 1960.

## THAMES VALLEY WATER BOARD.

**APPLICATIONS** are invited for the APPOINTMENT of an ENGINEERING ASSISTANT at a salary within the Special Grade for Engineering and Surveying Assistant, i.e., £785-£1,070 per annum. Applicants should be Chartered Civil Engineers with three years of experience of water supply engineering.

Appointment subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Acts, 1937-53, and the passing of a medical examination.

Applications, stating age, qualifications and experience, and details of posts held, together with the names and addresses of two referees, should reach the undersigned by 5th AUGUST, 1960.

G. F. DARLOW,  
Clerk to the Board.

Town Hall,  
Reading.

## APPOINTMENTS VACANT

## CITY OF LEICESTER.

**ASSISTANT REQUIRED** for Building and Estates Surveyor controlling maintenance work on buildings and designing alterations.

Applicants should have passed an Intermediate Examination for A.R.I.C.S. or A.R.I.B.A. They must be capable of preparing Drawings and supervising building work. Contract documents essential.

Salary A.P.T. I (£610-£765) or A.P.T. II (£765-£880), according to qualifications and experience.

National Conditions of Service. Superannuation. Medical examination.

Applications to the ENGINEER AND MANAGER, Water Dept., Bowling Green Street, Leicester, by 31st JULY, 1960.

## RUISLIP - NORTHWOOD URBAN DISTRICT COUNCIL.

**APPLICATIONS** are invited for the POST OF SENIOR ASSISTANT ENGINEER, salary A.P.T. IV (£1,065-£1,220) plus London Weighting. Subject to National Scheme, Local Government Superannuation Acts, and medical assessment.

Housing accommodation provided.

Application Forms, obtainable from the Engineer and Surveyor, to be returned by not later than TUESDAY, 2nd AUGUST, 1960.

EDWARD S. SAYWELL,

Clerk of the Council.

Council Offices,  
Northwood, Middx.

## WYCOMBE RURAL DISTRICT COUNCIL.

## ENGINEER AND SURVEYOR'S DEPARTMENT.

## APPOINTMENT OF ENGINEERING ASSISTANT.

**APPLICATIONS** are invited for the ABOVE PERMANENT POST, Salary Scale A.P.T. II (£765-£880), starting point depending on experience and qualifications.

A training allowance will be paid, and the Council will assist in providing housing accommodation if necessary.

N.C.C. Conditions of Service will apply.

The Council are engaged in an extensive programme of sewerage schemes, and this post offers exceptional opportunities for supervising contract work now in progress and designing and preparing new schemes.

Preference will be given to persons who have completed their professional training and/or have passed the Intermediate or equivalent Examination of the Institutions of Municipal or Civil Engineers.

Applications, giving age, particulars of present and past appointments, details of experience, and the names of two referees, are to be submitted to the Engineer and Surveyor, 8 Easton Street, High Wycombe, before 12th AUGUST, 1960.

L. C. RYSDALE,  
Clerk of the Council.

17 High Street,  
High Wycombe.

## STEVENAGE DEVELOPMENT CORPORATION.

**VACANCIES** are available in the Chief Engineer's Department for keen ENGINEERS, with suitable qualifications, seeking interesting and varied experience. The work includes design, construction and supervision of minor and estate roads, extensive cycleway and underpass system, lighting, pedestrian shopping centres, car parks, services, sewerage and drainage.

(a) Two Engineers — A.P.T. IV/V (£1,065-£1,375 p.a.).

(b) Two Engineering Assistants — A.P.T. II/III (£765-£1,065 p.a.).

These appointments are likely to last for five years or more, and provide a sound background for further professional advancement.

Housing accommodation in due course in appropriate cases. Local Government superannuation.

Applications, stating qualifications and experience, together with the names and addresses of two referees, to CHIEF ADMINISTRATIVE OFFICER, Aston House, near Stevenage, Herts., by 15th AUGUST, 1960.

**AGENT/ENGINEER REQUIRED** by medium-sized civil engineering contractors, to take control of road and sewer contracts in North London area. Permanent position with excellent prospects and good salary. Experience of application of proven and possessing initiative and drive. Applicant should write stating age, qualifications and details of experience which will be treated in the strictest confidence, to Box V.2289, "The Contract Journal."

**ENGINEER/AGENT**, with experience, REQUIRED for civil engineering contracts in East Anglia. Good prospects with permanent position and superannuation scheme available for a suitable applicant.—Apply, stating age, experience, and salary required, to DEREK COUCH (CONTRACTORS), LTD., Eye, Peterborough.

**VAL DE TRAVERS ASPHALTE, LTD.**, REQUIRE experienced ROLLED ASPHALT PLANT ENGINEER for Midland area.—Apply Area Manager, 5 Lower Temple Street, Birmingham, 2.

**JUNIOR CIVIL ENGINEERS REQUIRED** to work on sites with excellent opportunities for training. Applicants should be graduates or equivalent, and should be between the ages of 20 and 26. Apply in writing, giving brief details of qualifications and experience (including vacation course work), also stating age, to the Chief Engineer, THE DEMOLITION AND CONSTRUCTION CO., LTD., 3 St. James's Square, S.W.1.

**ESTIMATOR**, experience roads and sewers, REQUIRED by medium-sized South Coast contractors. Pension scheme. Car. Assistance with housing if needed.—Write fully to G. AND G. F. MAIDMENT (POOLE), LTD., Cranbrook Road, Parkstone, Poole, Dorset.

**CIVIL ENGINEER** is REQUIRED to undertake management of contracts from the initial inquiry to completion of the final certificate. Duties will include planning, organisation and operation of contracts, and in due course consideration will be given to establishing the successful applicant at a firm basis, particularly in respect of the running and supervision of a series of contracts. Applicants should have had wide experience. Preference will be given to a qualified man. Salary in accordance with ability. Details of age, qualifications, previous experience and positions held should accompany application.—Write to Box V.2249, "The Contract Journal."

**EXPERIENCED SITE ENGINEERS/SURVEYORS REQUIRED** by civil engineering contractors based in Hull. Fully experienced setting out, measuring, valuations and final accounts, and able to work with minimum supervision. Pension and life assurance scheme in operation. Excellent prospects for right man.—Write, giving full details, in strictest confidence, to Box V.2268, "The Contract Journal."

## APPOINTMENTS VACANT

**BONUS SURVEYOR REQUIRED** for contracts in the Greater London area. Experienced in taking off quantities; preplanning an advantage. Tradesmen will be considered for this post. Good salary, plus travelling expenses, non-contributory pension scheme. Write, giving full details, to Box V.2274, "The Contract Journal."

**REPRESENTATIVE** for contractors' plant REQUIRED by company operating in North Midland counties. Authorised John Deere tractor dealers. An ambitious man, aged 25 to 30, with some experience in the business and who is keen to win promotion, is sought. Salary, car and expenses.—Write, giving details, to KELLY EQUIPMENT CO., LTD., 421 Nottingham Road, Ilkeston, Derbyshire.

**CIVIL** engineering contractors REQUIRE AGENTS and CIVIL ENGINEERS for contracts in North Scotland. Must be prepared, if necessary, to live away from home.—Write, giving particulars of experience, etc., to Box 0179, Wm. Porteous & Co., Glasgow.

## TAYLOR WOODROW CONSTRUCTION, LTD.

Due to the expansion of the mechanical installation department, applications are invited for site appointments in the United Kingdom from:

**AGENTS**  
MECHANICAL ENGINEERS  
INSTRUMENT ENGINEERS  
FOREMEN PIPE AND INSTRUMENT FITTERS  
FOREMEN MILLRIGHTS AND ERECTORS  
Applicants must have had at least five years' experience of refinery, chemical plant and large industrial installations. Opportunities for tours overseas may occur.—Write, giving brief details of personal history, to:

Personnel Manager,  
TAYLOR WOODROW CONSTRUCTION, LTD.,  
345 Ruislip Road, Southall, Middlesex.

**TAYLOR WOODROW CONSTRUCTION, LTD.**, have vacancies for CIVIL ENGINEERS at the head offices at Southall. Applications are invited from men with wide site experience of major civil engineering projects to be engaged upon the planning of such works. Conditions of employment are attractive. A pension scheme is in operation.—Write, giving brief details of personal history and availability for interview to Personnel Manager, 345 Ruislip Road, Southall, Middlesex.

**GENERAL FOREMAN REQUIRED** for private estate development in Shrewsbury. About 100 houses annually, all trades, including road making and sewerage.—Apply: FLETCHER ESTATES (MARLESCOTT), LTD., Whitchurch Road, Shrewsbury. Telephone 4436.

**REPRESENTATIVES REQUIRED** to sell well-known specialised equipment to precast concrete industry in Home Counties, Midlands, or Lancashire and York areas. Work under contract, involving technical qualifications or experience in building or engineering, and prepared to work long hours, drive high mileages, and often spend nights away. Good salary, all expenses, and car provided. If interested, please apply in your own handwriting, stating qualifications and telling us why you would like the job.—ALAN R. DAVIES, LTD., 20 Whiteladies Road, Bristol, 8.

## EXPERIENCED BONUS AND COSTING SURVEYORS

Senior and Assistant, REQUIRED for civil engineering and roadwork contracts. Mobility essential.—Write, stating age, previous experience and salary required, to:

Personnel Officer,  
A. MONK AND CO., LTD.,  
Padgate, Warrington, Lancs.

**SITE AGENT REQUIRED** for building contract in the West Country.—Apply, in writing, stating age, experience, previous employers and salary required, to: LAVENDER MCMLLAN (CONTRACTORS), LTD., 54 Castle Common Road, Worcester Park, Surrey.

**ENGINEER AGENT REQUIRED**, East Yorks, first year, age 28 to 40. Experienced piling, foundation, R.C. work and/or estimating. Excellent prospects with well-established firm now expanding. Usual allowances, superannuation.—GENERAL FOREMAN also REQUIRED.—Write Box V.2279, "The Contract Journal."

**FITZPATRICK AND SON (CONTRACTORS), LTD.** have following staff vacancies:—  
(a) SITE CLERK for London area, experienced wages, checking and costs.

(b) H.O. SENIOR INVOICE CHECKER for bought ledger department, who correspond with suppliers. Posts permanent and pensionable.—Apply Secretary, 455 Old Ford Road, London, E.3.

**CIVIL ENGINEERS REQUIRED** for programming and planning civil engineering projects, including the design of incidental temporary work, in any part of Great Britain. Permanent positions with excellent prospects are available. Pension scheme and life assurance.—Apply in writing, stating education, age, qualifications, experience, and salary required, to ROBERTSON AND DUGLAS (CONTRACTORS), LTD., 395 George Road, Birmingham, 23.

**WANTED** experienced EXCAVATOR DRIVERS; also ENGINE FITTERS and WELDERS. Permanent, pensionable and progressive posts for capable men.—FRED. WATKINS (ENGINEERING), LTD., Coleford, Glos.

## QUALIFIED ENGINEER, A.M.I.C.E.

REQUIRED for head office and site duties. Design of R.C. structures, strutting, shoring, etc.—Apply:

Managing Director,  
J. JARVIS AND SONS, LTD.,  
239 Vauxhall Bridge Road, S.W.1.

**MANAGER REQUIRED** for civil engineering plant and transport maintenance department. Good prospects for fully qualified cost-conscious capable man. Salary range £1,000-£1,250. House available. Free pension scheme.—FRED. WATKINS (ENGINEERING), LTD., Coleford, Glos.

**J. CASE CO., LTD.**, will appoint additional AREA REPRESENTATIVES in the North-East, Midlands, and East. If you are an associated first-class earthmoving Representative and you wish to join a progressive and rapidly expanding company, we invite you to apply in the first instance to Sales Manager J. I. Case Co., Ltd., Mill Road, West Drayton Middlesex, who will treat every application in complete confidence.

## APPOINTMENTS VACANT

**SENIOR QUANTITY SURVEYOR REQUIRED** for employment with Cumberland builders. Experience of final accounts and estimates. Hours all available. Write, giving full details of experience and qualifications, and state salary required, to Box V.1715.

**ROLLED ASPHALT FOREMAN REQUIRED** for London work only. Permanent staff job with top wages and conditions for first-class man. **MOWLEM PAVING CO., LTD.**, 263 Tunnel Avenue, Greenwich, S.E.10. Telephone: GREENwich 2122.

**PLANT MAINTENANCE FITTER REQUIRED** for Greenwich depot. Staff job with good wages and conditions offered to first-class man. Some experience with small diesel engines desirable.—**MOWLEM PAVING CO., LTD.**, 263 Tunnel Avenue, S.E.10. Tel.: GREENwich 2122.

**BARBER-GREEN DRIVERS REQUIRED** for work in London area only. Permanent job to first-class man. **MOWLEM PAVING CO., LTD.**, 263 Tunnel Avenue, S.E.10. Tel.: GREENwich 2122.

**LIVE SALESMAN REQUIRED** for contractors' plant department. Permanent progressive pensionable post. Housing available.—**FRED WATKINS (ENGINEERING) LTD.**, Coleford, Glos.

**COMPETENT REPRESENTATIVE REQUIRED** by London plant company. Must be experienced and should preferably have contacts in London and Home Counties.—**DUDLEY VALE LTD.**, 3 Buckingham Place, London, S.W.1. Telephone: VICToria 0252.

**YOUNG Graduate CIVIL ENGINEER REQUIRED** by old-established firm dredging contractors. Previous experience not essential. Employment on permanent basis with full staff benefits to right man. Write Box V.2311, "The Contract Journal."

## JOHN LAING AND SON, LTD.

**REQUIRE ASSISTANT BUYERS** at their head office. Applicants should have had some experience of buying or as Builders' Assistants, and must be able to take off quantities. Applications welcome from men studying for H.N.C., O.S.C., or A.M.S., or those who have already qualified. Good prospects within the organisation, including pension scheme and other progressive benefits.—Applications, in writing, to:

Personnel Manager (A.B.11),  
JOHN LAING AND SON, LTD.,  
Building and Civil Engineering Contractors,  
London, N.W.7.

**BUILDING SURVEYORS (2)**, experienced, REQUIRED for progressive builders and contractors, for interesting and responsible work mainly in the London area. Capable of assisting in the management of large contracts from inquiry to final account. Apply in writing to **RICHARDSON**, Herbert House, Slade Green, Erith, Kent.

**SITE ENGINEER REQUIRED** by firm of civil engineering contractors operating in and around London. Excellent opportunity for young man with a background of general civil engineering works. Permanent progressive position. Pensionable. Good salary offered to right man.—Apply to **RUDDOCK AND MEIGHAN, LTD.**, Burford House, Harrow View, Wealdstone, Middlesex.

**F. J. LILLEY (CONTRACTORS), LTD.**, have vacancies for SENIOR and JUNIOR CIVIL ENGINEERS, tunnel contracts in Blackpool and London. Application should be made to the Assistant General Manager, Great Cambridge Road, By Church Street, London, N.9.

**PLANT HIRE ASSISTANT MANAGER**—Due to promotion of existing staff, a position arises with virile and expanding plant hire company based in North-West London. Applicants should have sound basic knowledge of all types contractors' plant and hire rates, and have the ability to deal promptly and satisfactorily with telephone inquiries. This is an excellent opportunity for capable and enthusiastic man to quickly reach Plant Manager status. Basic salary up to £1,000 p.a., plus bonus. Upon appointment to staff, a service agreement and superannuation available.—Applications to S. M. Wiles, METRO-PLANT, LTD., 169/171 Cricklewood Broadway, London, W.8. GLA 7691.

**SENIOR LAYOUT AND SURVEYING ASSISTANT** REQUIRED for industrial development which includes shop and flat schemes throughout the country. Applicant should be a competent Draughtsman with considerable experience in design of layouts. Interesting work, with good prospects. Salary up to £1,000 p.a. Car allowance or use of office car. Holidays honoured.—Address replies to the Managing Director, Survey and Architectural Dept., **DAVIS ESTATES, LTD.**, 346-50 Kilburn High Road, London, N.W.6.

## MECHANICAL DESIGN ENGINEER

For Leeds. Substantial engineering company with extensive overseas interests REQUIRES MECHANICAL DESIGN ENGINEER to work in the Leeds office on earthmoving and mechanical handling equipment design projects. The successful applicant must have outstanding technical ability, a mechanical engineering degree or equivalent qualification, adequate shop experience, and should preferably be between 30 and 40 years of age. Salary will be attractive, and positive promotion to top level is intended.—Replies, which will be treated in strict confidence, should be addressed to:

The Managing Director,  
BOX V.2325, "THE CONTRACT JOURNAL."

**PLANNING ENGINEERS**—An exceptional opportunity exists for TWO PLANNING ENGINEERS of senior capability in the structural department of a prominent national building firm. One will be required to take the lead in the general running of a planning office engaged on the comprehensive operational programming of structural and building contracts. The other will specialise in methods and the application of modern techniques in the development of special techniques. Both appointments hold genuine prospects for soundly experienced, suitably qualified men. A progressive approach and outlook are vital factors in these appointments rather than precise limits of age and further experience and discussion with interested candidates will readily be arranged.—Reply in confidence with details of age, experience, and all relevant personal particulars, to Box PE.3567, A.K. Advertising, 212a Shafesbury Avenue, London, W.C.2. The company's existing staff are fully informed of the publication of these requirements.

**TUNNEL MINERS WANTED** for rock tunnel contract in West Country.—Apply in writing, giving experience and when available, to Box V.2367.

"The Contract Journal."

## APPOINTMENTS VACANT

**WANTED, ENGINEER/AGENT** for large excavation contract in West Scotland.—Please write full details of experience and salary required to Box V.2332, "The Contract Journal."

**NATIONAL** building contractors invite applications from **DESIGNER/DRAUGHTSMEN**, for work in their head office, London. The duties will involve the design of framework schemes for major contracts in London and Southern England. The positions offer interesting and varied work, and good opportunities for progress in an expanding organisation. Applicants should have had experience of this type of work and should have a good knowledge of reinforced concrete. Please send full details to Box NB.3555, A.K. Advertising, 212a Shafesbury Ave., London, W.C.2.

**J. I. CASE CO., LTD.**, REQUIRE an INVOICE AND COST CLERK (Male). Telephone in the first instance for an appointment to the Service Manager—Waxlow 4166, J. I. Case Co., Ltd., Clayton Road, Ruislip Road, Greenford, Middlesex.

## SURVEYOR

**REQUIRED** by old-established and expanding Cambridge building firm for site measurement, interim calculations and preparation of final accounts up to £1,000. Excellent salary for man with right experience and qualifications.—Full details, in confidence, to:

BOX V.2298, "THE CONTRACT JOURNAL."

**NATIONAL** building and civil engineering contractors invite applications from experienced men for the following positions: Agents for control of major contracts. Good experience of reinforced concrete construction essential, together with knowledge of modern methods of construction and planning; **GENERAL FOREMAN**, preferably carpenter-trained and with experience in charge of reinforced concrete construction; **SECTONAL FOREMAN**, preferably carpenter-trained and with experience in charge of smaller contracts, or previous experience in charge of part of larger works. The appointments will be to the permanent staff and offer interesting and varied work, with excellent opportunities for advancement and responsible positions.—Please send full details in confidence to Box NB.3565, A.K. Advertising, 212a Shafesbury Avenue, London, W.C.2.

**SENIOR ENGINEER/AGENT REQUIRED** for permanent position on contracts up to £1,000. In London area. Applicants will be eligible for Area Agent position and superannuation scheme after satisfactory service.—Write Box V.2336, "The Contract Journal."

**SENIOR DRAUGHTSMEN REQUIRED** for well-paid permanent appointments. Superannuation scheme—teenage facilities.—Applications, with details of past experience, present salary, and copy references, to be submitted to the Manager, the Concrete Department, **CROFT GRANITE, BRICK AND CONCRETE CO., LTD.**, Croft, near Leicester.

**J. I. CASE CO., LTD.**, REQUIRE an INSIDE FITTER/TIMBERFITTER. Telephone in the first instance for an appointment to the Service Manager—Waxlow 4166, J. I. Case Co., Ltd., Clayton Road, Ruislip Road, Greenford, Middlesex.

## PRODUCTION MANAGER

A rapidly expanding group of companies REQUIRE a PRODUCTION MANAGER for their Midland factory, fully experienced in the production of hydraulically pressurised steel and kerbs. This is a top-grade appointment calling for a man with energy, drive and initiative. Superannuation scheme in force.

WRITE BOX V.2296, "THE CONTRACT JOURNAL."

**HIGGS AND HILL, LTD.**, REQUIRE a CIVIL ENGINEERING ESTIMATOR for London office to assist in the preparation of interesting and varied civil engineering tenders. Applicants, preferably 28-32, should have had considerable site experience with contractors using modern methods of construction. The position is pensionable; good salary and conditions offered.—Write, stating age, qualifications, and salary required, to the Secretary, **HIGGS AND HILL, LTD.**, Crown Works, South Lambeth Road, London, S.W.8.

**FOREMAN FITTER REQUIRED** by British civil engineering contractors, for large earthmoving project abroad. Applicants must be apprentice-trained with several years' experience covering all aspects of maintenance and repair of Caterpillar plant. 18-month tour in healthy climate. Good salary and allowances: free accommodation. Telephone Sloane 0781, or write to Box V.2365, "The Contract Journal," quoting Ref. NOP/36.

**SENIOR and JUNIOR ENGINEERS REQUIRED** for sites in Bedfordshire and Gloucestershire.—Apply Contracts Manager, **SYDNEY GREEN AND SONS (CONTRACTORS), LTD.**, Highlands Farm, Henley-on-Thames, Oxon.

## GENERAL MANAGER

With director status REQUIRED by nationally known organisation of building, civil engineering contractors and estate developers to take control of construction department on exciting job with considerable prospects. Salary appropriate to responsibility.—Take taken. Excellent life assurance and pension scheme in operation.—Write, in absolute confidence, giving full details, to:

Manager Director,  
BOX V.2297, "THE CONTRACT JOURNAL."

**J. I. CASE CO., LTD.**, REQUIRE AN ASSISTANT STOREKEEPER.—Telephone in the first instance for an appointment to the Service Manager—Waxlow 4166, J. I. Case Co., Ltd., Clayton Road, Ruislip Road, Greenford, Middlesex.

**A FIRM** of high reputation REQUIRES A GENERAL FOREMAN who is skilled in organising and controlling sportsground construction and engineering contracts. Must be able to drive.—Write Box V.2342, "The Contract Journal."

**ESTIMATOR/TAKER-OFF REQUIRED** by reinforced concrete floor specialists in Central London. This position with growing firm offers exceptional prospects.—Write, stating age, experience, and salary required, to Box V.2341, "The Contract Journal."

**O PERATOR** for Pilcon 650 drilling rig REQUIRED. Must be experienced in core and water well drilling, and be prepared to travel anywhere in U.K. taking full control of rig and crew. Good prospects for suitable applicant.—Write details of experience to Box V.2340, "The Contract Journal."

## APPOINTMENTS VACANT

**JUNIOR CIVIL ENGINEERS.**—Applications are invited for two appointments with **RICHARD COSTAIN LTD.**, for service in Iran. Candidates, preferably aged 23-26, should be University or Technical College Graduates with second-class professional qualifications, who have had practical experience of the design and installation of drainage and water purification works. The posts will be based on Tehran, with some travel, and will be mainly concerned with design and work for building schemes. Total remuneration in the range £1,900-2,200 p.a., with bachelor accommodation provided free. Tours of 18 months each, followed by three months' paid leave in U.K. Kit allowance £60.—Please address applications to Overseas Personnel Officer, 111 Westminster Bridge Road, London, S.E.1.

**DRAWING OFFICE ASSISTANT REQUIRED** for large estate developers, working on houses, shops and flats. Applicant should be a competent Draughtsman and interested in architectural field surveying. Salary up to £150 per week. Pension scheme. Holidays honoured.—Address replies to the Manager, Planning, Survey and Architectural Dept., **DAVIS ESTATES, LTD.**, 346-50 Kilburn High Road, London, N.W.6.

**ASSISTANT ENGINEER or DESIGNER-DRAUGHTSMAN REQUIRED** for design work, reinforced and prestressed concrete floors, etc.—Write, detailing age, education, training, experience, to P.C. FLOORS, LTD., 64-66 Battersea High Street, S.W.1.

## CUBITTS

Civil engineering department invite applications from **ESTIMATORS** for positions in London head office. Applicants must be experienced in estimating for major works, and preference will be given to those aged 33-38. The appointments are permanent and offer good scope for progress.—Please send full details, in confidence, to:

Personnel Manager (CI/K.3420),  
**HOLLAND & HANNEN AND CUBITTS (G.B.), LTD.**,  
1 Queen Anne's Gate, London, S.W.1.

**CIVIL ENGINEERING INSPECTOR REQUIRED** for work on the construction of nuclear power stations in this country.—Applicants, who must be well qualified, should write, stating age, qualifications and experience, to the Administrative Assistant, Group Resident Superintendent's Department, Hinkley Point, near Bridgwater, Somerset.

**SENIOR COST AND BONUS SURVEYOR REQUIRED** by prominent London contractor to take charge of a section covering several important contracts. Must be well experienced in the assessment of targets and site negotiations, and also in the preparation of unit costing returns. Progressive and interesting position for the right applicant.—Write in confidence, giving full details of experience in chronological order, and salary required, to Box NB.3585, Advertising, 212a Shafesbury Avenue, London, W.C.2.

**WIMPY**.—Applications are invited for the following head office appointments.—**FORMWORK DESIGNER**. First-class Foreman Carpenter, age 30-40, having extensive knowledge of building and civil engineering shoring, with the ability to preplan and organise formwork on a large scale, required to assist in a senior capacity in preparing formwork design section.—**FORMWORK DRAUGHTSMEN**, aged 25-35, with varied experience of civil engineering shoring, required to train as formwork designers. O.N.C. preferred, but completion of first year apprenticeship C. and G. essential. Modern offices. 5-day week, staff restaurant, contributory pension scheme.—Written applications, on to Planning Department, **GEORGE WIMPY AND CO., LTD.**, 27 Hammersmith Grove, London, W.6.

## ENGINEER

**REQUIRED** for setting out and levelling on medium-size road, sewer and building contracts. This would suit a young man wishing to gain experience for advancement to engineer/agent. Transport provided. Pension scheme in operation after qualifying period. Applications to:

Civil Engineering Manager,  
H. C. JAMES, LTD.,  
183 High Town Road, Luton.

**MEASURING SURVEYORS REQUIRED** immediately for interesting civil engineering and building works in Berkshire area. Hostel accommodation available.—Apply in writing, stating age, experience, salary required, with references, to Secretary, W. E. CHIVERS AND SONS, LTD., Estcourt Street, Devizes, Wilts.

**CHIEF ESTIMATOR**.—THE LONDON FERRO-CONCRETE CO., LTD., urgently REQUIRE a top-class Civil Estimator, aged about 30-35, for estimating in-situ and concrete structures. Applications shall be sent to the Managing Director, Maxted Close, Hemel Hempstead.

**SENIOR INSPECTION ENGINEER REQUIRED** for large construction sites in West Pakistan. Successful candidate will be engaged mainly on progressing and liaison duties, and will be expected to accept complete responsibility for the contractors' final inspections prior to handing over of factory buildings and ancillary works. Applicants should be fully conversant with all building, civil engineering, trades and familiar with mechanical and electrical drawings in addition. A good salary is offered for a tour of 12/15 months, plus a local allowance of £35 per month, plus a separation allowance if married. Free air-conditioned single quarters are provided. Generous house purchase and bonus. £75 kit allowance.—Write, details age, experience, etc., to (I.A.M. 233), **BAULFOUR, BEATTY AND CO., LTD.**, Bow Bells House, Bread Street (Cheapside), London, E.C.4.

**CIVIL ENGINEER/AGENT REQUIRED** to take charge of an 11-storey frame contract in the Midlands. Previous experience in control of multi-storey construction work involving use of tower cranes is essential.—Please write, stating age and date of availability, to Senior Personnel Officer, **RICHARD COSTAIN LTD.**, 111 Westminster Bridge Road, London, S.E.1.

**SITE MEASURING AND COSTING SURVEYORS REQUIRED** for contract near Stevenage. Local men preferred, although there will be opportunities to travel later. Age between 21 and 30. Must have had previous site experience and knowledge of standard methods of measurement.—Apply, with brief details of experience, to Contract Labour Department, **SIMON-CARVES, LTD.**, Headingley Heath, Stockport, Cheshire, quoting Ref. SC.77.

## APPOINTMENTS VACANT

**CIVIL ENGINEERING** and building contractors require a SENIOR CONTRACTS MANAGER for the civil engineering department of their Northern branch office. Applicants, who should preferably be qualified Civil Engineers, must have had considerable experience in a similar capacity and be capable of estimating for civil engineering work of various types. Opportunity for an experienced man to build up the area. First-class salary and conditions.—Please write in strict confidence, with full details, to Box No. CM/C1663 LPE, Romano House, 399/401 Strand, London, W.C.2.

**GENERAL FOREMAN** WANTED for rock tunnel contract in West Country.—Apply in writing, giving experience and when available, to Box V.2368, "The Contract Journal."

**SUB-AGENT/ENGINEER** REQUIRED initially for contract at Newport. Eligible to join staff pension scheme after 12 months' service.—Applications with details of age, training and experience, to A. JACKAMAN AND SON, LTD., 9 Bath Road, Slough, Bucks.

**MOWERLESS PAVING CO., LTD.**, REQUIRE additional staff to control and organise the work of road gangs operating in the London area. Experienced and practical men are invited to apply in writing, with details of training, previous positions, age, etc., to 19 Grosvenor Place, S.W.1. A good salary commensurate with experience is envisaged, and a car is provided, allowance paid. A pension scheme operates after probationary period. All replies treated as confidential.

## TARMAC ROADSTONE, LTD.

**ASSISTANT to the DEVELOPMENT MANAGER.** Applications are invited for the above post from men aged from 23 to 30, who possess a university degree in civil or mechanical engineering and have already gained a few years' experience in industry. The work involved covers the design and production of plant for handling and processing of roadstone materials, together with the development of these materials and their uses within the industry. The position offers a wide interest and good career prospects.—Written applications containing full details, should be made to:

The Development Manager,  
TARMAC ROADSTONE, LTD.,  
Ettingshall, Wolverhampton.

**SENIOR CONTRACTOR'S QUANTITY SURVEYOR** REQUIRED for London area. Head office appointment offering permanency and good opportunities to capable man with good knowledge of contract procedure, cost estimation, etc. Car provided for duties involved. Pension scheme, luncheon vouchers.—Write, giving full particulars, to Box V.2359, "The Contract Journal."

**PLANT AND DEPOT MANAGER** REQUIRED immediately. To be responsible for workshops and stores, and to supervise the servicing of mechanical plant employed on a variety of civil engineering and underground contracts in South Wales. Experience with Electro-located contractors, and general contractors' plant essential. Age 30-45. The position will be permanent and carries a good basic salary with bonus and usual allowances.—Please write, giving details of career and qualifications, quoting Ref. 239, to the Personnel Officer, THE CEMENTATION CO., LTD., 20 Albert Embankment, London, S.E.11.

**SITE CLERK** REQUIRED for contract at Whiston, near Newport. Experienced in W.R.A., P.A.Y.E., and site records, estimations, giving details of experience, to A. JACKAMAN AND SON, LTD., 9 Bath Road, Slough, Bucks.

**EXPERIENCED FOREMAN** REQUIRED for building and civil engineering contracts in the West Country. Prospects of permanency and pension for suitable applicants. Written applications should state age, training, experience, and salary required. Apply C. P. UNWIN AND SONS, LTD., 33 St. Peter Street, Tiverton, Devon.

**QUALITY CONTROLLER** REQUIRED for concrete and allied materials. Successful applicant will spend a few weeks in H.O. laboratory before taking charge of the laboratory. A permanent pensionable position is envisaged. Full particulars to Personnel Officer, TARMAC CIVIL ENGINEERING, LTD., Ettingshall, Wolverhampton.

## WORKS MANAGER

The rapidly expanding BANBURY BUILDING GROUP REQUIRE a WORKS MANAGER for their Banbury factory. Only man with previous experience and a sound practical knowledge in precise concrete buildings need apply. First-class salary and according to experience. Superannuation scheme available.—Apply, stating experience and salary required, to:

Works Director,  
PORTABLE CONCRETE BUILDINGS, LTD.,  
Adderbury, near Banbury, Oxon.

**ESTIMATOR** REQUIRED by old-established, medium-sized West Midland civil engineering and building contractors. At least two years' experience and preferably with site experience. This post is progressive and pensionable after probationary period.—Write Box V.2345, "The Contract Journal."

**MANAGER** REQUIRED to take immediate control of a small scaffolding and plant hire business in S.W. London. Applicants must have proved and successful experience in sales, estimating, site supervision, costing and office organisation.—Write in first instance to Box V.2356, "The Contract Journal."

**CIVIL ENGINEER** REQUIRED for contract in West Country. Experience in setting-out and administration of tunnels, shafts and underground chambers in rock.—Write in confidence, giving experience and when available, to Box V.2366, "The Contract Journal."

**SITE ENGINEERS** REQUIRED for civil engineering contracts initially at Worcester and Newport. Staff pension scheme in operation after 12 months' service.—Applications, with details of training and experience, to A. JACKAMAN AND SON, LTD., 9 Bath Road, Slough, Bucks.

**EXPERIENCED BUYER** REQUIRED for civil engineering contractors.—Write, in confidence, stating full details, to Box V.2378, "The Contract Journal."

**ACCOUNTS AND GENERAL CLERK** (Male) REQUIRED in Wandsworth civil engineering contractors' offices. Must be quick and accurate at figures and an energetic person. Permanent position and pension scheme for right man.—Please write details of past experience, age and present salary, to Box V.2377, "The Contract Journal."

## APPOINTMENTS WANTED

**GENT / GENERAL FOREMAN**, with own Site Foreman, SEEKS CHANGE. 30 years' experience with sewerage concrete construction, bridges, reservoir and water mains. Full control of contract essential. Facilities to travel anywhere. Fully conversant with instruments, setting-out, etc. Write Box W.2327, "The Contract Journal."

**ENGINEER**, married, aged 32, SEEKS A PROGRESSIVE POSITION with a company in Britain coming up in the autumn of this year. Seven years' sewerage and water main experience as agent contractor in England, and the last 5 years as project engineer on the construction of super highways in Ontario, Canada.—Write to: M. J. WILKIN, 3281 Woodlawn Avenue, Windsor, Ontario, Canada.

**SITE ENGINEER** (32 years, B.Sc.), experience power stations, hydro schemes U.K., SEEKS FURTHER POST ABROAD. Anywhere considered. Write Box W.2383, "The Contract Journal."

**BRANCH MANAGER**, mastic asphalt, built-up felt roofing. Capable of estimating, servicing and supervising of contracts, measuring and final invoicing. Laboratory training. 17 years' experience. SEEKS CHANGE. Write Box W.2384, "The Contract Journal."

**SENIOR ESTIMATOR** DESIRES CHANGE. Wide experience of building and civil engineering. Good-class work. Write Box W.2382, "The Contract Journal."

**AREA MANAGER** (building and civil engineering) DESIRES CHANGE to progressive organisation. Could reorganise company, introducing modern methods throughout. Write Box W.2374, "The Contract Journal."

**CIVIL ENGINEERING AGENT**, age 43, presently engaged, SEEKS NEW APPOINTMENT in the U.K. as SITE MANAGER on major contract or management of number of medium-size contracts. Good experience in negotiations, planning, estimating and construction on variety of works, U.K. and overseas, including power stations and marine structures. Good organiser and administrator. References avail, as to ability and integrity.—Write Box W.2385, "The Contract Journal."

**QUALIFIED ACCOUNTANT COST ACCOUNTANT**, with several years' experience in the civil engineering industry, SEEKS RESPONSIBLE APPOINTMENT, preferably London or the south. Write Box W.2389, "The Contract Journal."

**CIVIL ENGINEERING AGENT** with 20 years' experience DESIRES AN APPOINTMENT with an expanding organisation that would lead to a senior post. Experience includes estimating for and supervision of various classes of work up to £1m. contract value.—Write Box W.2392, "The Contract Journal."

**FORMER** well-known barrister SEEKS EMPLOYMENT with large firm of civil engineering contractors as LEGAL ADVISER and CLAIMS ASSESSOR. Already has over two years' experience. Write Box W.2388, "The Contract Journal."

For Advertisements received too late for classification see page 301

## WORK REQUIRED

**MOTOR BOAT OWNERS REQUIRE** CONSTRUCTIONAL WORK, ATTENDANCE, PERSONNEL, GOODS, TOWAGE, ETC. Craft and labour supplied.—Apply: THOMAS BROS., 62 Sussex Road, East Ham, London, E.6. Telephone: GRA. 6697/3151.

**SITE CLEARANCE, BULK EXCAVATION,** JAMES AND CO., LTD., Trading Estate, Slough, Telephone: Slough 20361—Ext. 4.

**SAM BOOTH, LTD.**, Perrymount Chambers, Haywards Heath, Sussex. Tel.: Haywards Heath 1126 and 1258. SUB-CONTRACT OR HIRE: D9s, with Bulldozers and Caterpillar 462 Scrapers.

**ALLEN OXFORD GRADERS** for HIRE, GRASPHALTE, LTD., Hampton Hill, Middlesex. Telephone: Molesey 4343.

**EARTHMoving, LEVELLING, LAND DRAINAGE,** RECLAMATION, ETC. Consult the Surface Specialists.—SURFACE MAINTENANCE SERVICES, LTD., 124 Old Christchurch Road, Bournemouth. Tel. 24673. Branches throughout the country.

**WANTED, EXCAVATION, SITE CLEARANCE and DEMOLITION WORK.** R. BARKER (PECKHAM), LTD., New Cross 3337.

**EXCAVATION SUB-CONTRACTS.** Technical staff available to estimate, programme and price commercial projects. Particular attention given to finish and compaction. D9, D8, TD18 and TD4 Scrapers, Excavators, Loading Shovels and Lorries available with competent and imaginative supervision for execution of work.—DICK HAMPTON, Broadwater Farm, Blacknest, Alton, Hants. Tel.: Bentley 2241.

**BULK EARTHMoving**, direct contract or sub-contract. Also BULLDOZERS and SCRAPERS for HIRE.—FRANK R. WALPOLE, LTD., 126 Wing Road, Leighton Buzzard, Beds. Leighton Buzzard 3353.

**SPECIALISED EXPLOSIVES SERVICES**, U.K. and OVERSEAS MOBILE UNITS coverage on service contracts for sea walls and dangerous structures, etc.—124 Old Shoreham Road, Southwick, Sussex. Tel.: Southwick 3791 or Shoreham 4193.

**EXCAVATIONS, SITE CLEARANCES, DEMOLITION and PLANT HIRE.** SUB-CONTRACT OR HIRE WANTED, any area. D. W. STONE, LTD., St. Leonards Road, Hove, S. Sussex. Tel.: Hove 46396.

**FOR HIRE**, One Drott and Six TIPPER LORRIES, SITE CLEARANCE, Direct. I. W. DOYE AND CO., Demolition Contractors, 188 Plumstead High Street, S.E.18. Woolwich 5318.

**UPROOTING**—TREES, STUMPS, HEDGES, ETC. We have the most experience and all modern equipment.—T. GRAVESON, LTD., Warton, Carnforth, Lancs. Telephone: Carnforth 381 and 382.

**BULK EXCAVATIONS**, any quantity quoted for COFF AND SON (EXCAVATIONS), LTD., Buckhurst Hill, Cheshire, Ascot, Berks. Ascot 1026/78.

**BULK EXCAVATIONS and SITE WORKS** undertaken. DIRECT or on SUB-CONTRACT basis. Quotations given for large or small contracts anywhere.—S. AND L. BULL BROS., LTD., 126A High Street, Winchester. Telephone: Winchester 2264.

**FOR HIRE**—MIDLANDS AREA: D4s, 10RBs, COMPRESSORS, DROTTS.—KINGS NORTON EXCAVATORS, LTD., Telephone: Sedgley 2513.

**D8s, D7s** (1960), with Scrapers or Dozers, Powershift TRAXCAVATORS and DUMP TRUCKS available for EARTHMoving CONTRACTS or HIRE in the south of England.—WADSWORTH (DEMOLITION AND EXCAVATION), LTD., Sidmouth Road, Exeter 66246.

## WORK REQUIRED

**CONTROLLED EXPLOSIVES, LTD.**, specialise in the fragmentation of mass and reinforced concrete inside or outside buildings. Demolition of bridges and chimneys, mass rock, trenching, sewage beds, engine beds, etc., and deep drilling for quarries. Particulars from 11 Church Street, Oldbury, Birmingham. Telephone: BRodewell 3117.

**If TREES, ROOTS or UNDERGROWTH** feature in your contract, we would be pleased to quote for their removal or disposal.—BAGSHOT SAWMILLS, LTD., 32 London Road, Camberley, Surrey. Telephone 14.

**BULK EXCAVATION WANTED.** We have our own staff of qualified Civil Engineers and have the following machines ready for work: D9s, D8s, D7s, D6s, D4s, with Dozers, Scrapers, and Rooters. Also Ruston Excavators, with all equipments, and a fleet of new Tipping Lorries. No job is too small or too large.—**THE PLANT HIRE AND CONTRACTORS (CHELTENHAM), LTD.**, "Southam Court," 98 Prestbury Road, Cheltenham, Glos.

**EXCAVATION**—Roads, sewers, concreting, Drainage, etc. CONTRACTS WANTED. Qualified Engineer, competent labour force, own equipment, anywhere.—**HARRISON**, Wethersfield Manor, Braintree, Essex. Telephone: Shalford Green 464.

**WANTED, HIRE or CONTRACT WORK** for modern fleet of DW21s, D9s, D8s, 15-ton Rear Dump Euclids and 3SRB Face Shovel.—Apply: BRODERICK AND RYAN, LTD., 421 Nottingham Road, Ilkeston, Derbyshire. Telephone: 4381/2.

**EARTHMoving, EXCAVATION, CONTRACT or HIRE.** Bulldozers, Scrapers, Traxcavators, Trenchers, etc. Phone: Chiswick 8511/2, Maidstone 7294/5/6, TRACTORS HIRE (CHISWICK), LTD., 300 Chiswick High Road, W.4.

**EARTHMoving** in south-west carried out by modern fleet of Caterpillar D8s or smaller. Also motor scrapers, bulldozers, excavators and mobile cranes.—**GRANGE PLANT**, LTD., Honiton, Devon. Telephone: Broadembury 330-355.

**BULK EARTHMoving, OVERBURDEN STRIPPING, EXCAVATIONS** for roads, airfields, etc. with large fleet of Caterpillar D8 and D7 Tractors. Keenest prices for work anywhere in the country.—**CONTRACTORS' PLANT HIRING CO., LTD.**, Barkby Road, Leighton Buzzard, Tel.: Leighton 663/4/5/6.

**NORTHERN REPRESENTATIVE**: 91 Shaw Road South, Shaw Heath, Stockport. Telephone: STockport 3082.

**TARMACADAM and TARSPraying** by specialists.

Private Drives, Roads, Forecourts, Car Parks, etc. Resurfaced or Reconstructed.—**STANLEY LUCAS (SLOUGH), LTD.**, SloUGH 21279.

**If GRADING, SEEDING, TURFING and PLANTING** form part of your CONTRACT, we will be pleased to quote you.—**HOLDRUP**, 139 Bells Hill, Barnet. Telephone 9111.

**TARMACADAM and BITUMINOUS MACADAM SURFACING** WANTED. New Barber-Greene Junior (steered) and full roller range to 10 tons. HIRE CONTRACT or SUB-CONTRACT. Immediate attention.—**D. S. O'BRIEN AND CO.**, Tarmacadam Paving Contractors, Olive Mount, Birkenhead. Tel.: Birkenhead 6605.

**DEMEX, LTD., EXPLOSIVES ENGINEERS.** For Fragmentation, Breaking-out or Excavation of Rock, Massed or Reinforced Concrete; Demolition of Bridges, Heavy Retaining Walls, Chimneys, etc. Our engineers are skilled at working in confined or built-up areas. Competitive prices and prompt service. Contact: DEMEX, LTD., 125 Goldthorn Hill, Wolverhampton. Telephone: 36136.

**D9 SKID SHOVEL** BT6D, fitted with Boughton Winch or Tandem at keenest rate.—**JAMES COOPER**, LTD., 28 Kensington Church Street, London, W.8. Tel.: Western 3412.

**AVAILABLE for HIRE or CONTRACT WORK.** A fleet of Five Caterpillar D9 TRACTORS, with 18/25yd. Scrapers. Very competitive rates quoted for bulk earthmoving or long hire. Also available, D8 and D7 TRACTORS.—Apply: GAYLORD, EDWARDS AND CO., LTD., Carlton Road, Nottingham. Telephone 50881.

**WANTED, EXCAVATION, SITE CLEARANCE and DEMOLITION WORK.** D. DOYLE, 36 Belmont Row, Birmingham, 4. Telephone: Aston 3171.

**SITE CLEARANCE CO., LTD.**, specialists in removal of trees and roots. Explosive Engineers and Demolition Contractors. Details, one Q.M. Lane, Appleton, Warrington. Telephone: Stockton Heath 309.

## DIRECTORSHIP

**DIRECTORSHIP** in medium-sized public works company is SOUGHT by qualified CIVIL ENGINEER (31).—Write Box X.2361, "The Contract Journal."

## FINANCE

**HIRE PURCHASE FINANCE** available for all types of MACHINERY, etc.—Apply: D. EVERARD LTD., 62 Oxford Street, London, W.1. MUSEUM 0811.

## LAND AND PROPERTY

**BUILDING LAND** for SALE, planning permission for 16 houses, roads and sewers laid, in East Midlands Industrial town.—Write Box X.2363, "The Contract Journal."

## AGENCIES

**EFFICIENT** newly formed sales organisation with service and stocking facilities centred on Liverpool and Blackpool. SEEK PLANT SALES and HIRING AGENCY.—Letters to Box X.2362, "The Contract Journal."

**WELL-KNOWN** Glasgow plant hire and sales department wishes to expand its sales department and REQUIRES ADDITIONAL AGENCIES for this purpose. Excellent workshop, spare parts and service facilities available.—For further particulars, write Box X.2358, "The Contract Journal."

**SCOTTISH MANUFACTURERS' AGENT**, covering Central and North of Scotland with first-class connections to engineers, architects, surveyors, builders and engineering companies. SEEKS AGENCIES for products allied to the building trade.

Write Box X.2381, "The Contract Journal."

**UNIQUE SPECIALISTS** offer an additional REPRESENTATION to free-lance REPRESENTATIVES with existing connection with civil engineering contractors and industrial concerns in the London, Manchester and Cardiff areas. Knowledge of reinforced concrete desirable. Commission and retain. Give full particulars to Box X.2387, "The Contract Journal."

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**Civil Engineering & Building work. U.K. or overseas**

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Phone: Ewell 9341

### ACCOMMODATION

**CARAVANS TO RENT** for men with families. Rent £7 to £17 per month. Delivery anywhere. LANDSMAN'S SERVICES. Buckden, Huntingdonshire. Telephone: Buckden 287.

**ACCOMMODATE YOUR EMPLOYEES** in a cosy 4-berth CARAVAN, fully equipped with heating, lighting, cooking and washing facilities. Hire rates from £9 per week for four persons. Caravans delivered anywhere.—NORTHERN CARAVAN DISTRIBUTORS. Handforth, Ches. Tel.: Mercury 4255 6.

### INVENTIONS

**INDUSTRIAL ENGINEERS OF REPUTE** invite, in strict confidence, DETAILS OF INVENTIONS, with object of manufacturing and world distribution. Write Box K.L.S17, "The Contract Journal."

### DIVING

**DIVERS IMMEDIATELY AVAILABLE.** Welding, cutting, construction, etc. Any part of world. UNDER WATER WELDERS AND REPAIRERS, LTD., Cardiff. Tel. 29631. (After hours: Penarth 58131.)

**DIVING WORK REQUIRED.** All classes. Competent divers. A. J. PARSLAW, Diving Contractor, 14 Haig Avenue, Brighton, 6. Telephone (all times) Brighton 61228.

**DIVERS and FROGMEN** at immediate notice. DIVING SPECIALISTS, LTD., Dartford 24139. Night—Farnham 2452.

### BUSINESSES—SALE OR WANTED

**CIVIL ENGINEERING AND BUILDING COMPANY** for SALE, Mid-Essex. Large T/O. Excellent staff, foreman, and plant fleet. Yard, sell or lease, 70,000 sq. ft., comprising offices, fully equipped fitters' shop and stores, joiners' shop, 6,000 sq. ft., modern machinery. Write Box X.2329, "The Contract Journal."

**FOR SALE**, SANDPIT, fully equipped. Going concern. New Corton, Northants.—BRIGSTOCK SAND AND GRAVEL LTD., 292 Northampton Road, Rushden, Northants. Phone: Rushden 2642.

**FOR SALE**, Essex, BUILDERS' AND CONTRACTORS' BUSINESS. Large yard with well-equipped brick workshops, stores and offices. Staff approx. 90. Turnover approx. £150,000. Price £30,000. Owner retiring.—Write Box X.2339, "The Contract Journal."

**ESTABLISHED CONTRACTORS' PLANT HIRE AND MERCHANTISING BUSINESS** for SALE as GOING CONCERN. Turnover £100,000 p.a. Freehold premises with yard (10,000 sq. ft.), workshop, offices, etc., near Central London. Divisors remain if required for given period. Price £25,000. Stock and equipment at valuation, if required.

Write Box X.2360, "The Contract Journal."

**CIVIL ENGINEERING AND PLANT HIRE CONTRACTORS** for SALE. Large fleet of modern big plant, all working. Workshops and offices on freehold site of 5 acres in large town on main line adjacent new Yorkshire Motorway. Room for few houses. Annual turnover about £250,000. Present management would remain.

Write Box X.2375, "The Contract Journal."

**FOR SALE** in the N.E. well-appointed SHOP selling do-it-yourself items. Very long lease. Great potential. Last year's trading over £6,600. Rent £450. Goodwill and fittings £4,500. S.A.V. Also available or separated, a CONTRACTING BUSINESS with contracts to the value of over £15,000. Equipment and materials at valuation. Goodwill £5,000. Present management available.

Write Box X.2386, "The Contract Journal."

**WELL-ESTABLISHED PLANT HIRE AND BULLDOZING BUSINESS** for SALE. 450ft. frontage to main "A" road, close A30 and 303, on Somerset/Dorset Devon borders. New bungalow, workshop, garage, etc., with 3½ acres. Freehold. Only ill-health forces sale. All in as a going concern.—Details from: JACKSON-STOPS AND STAFF, 30 Hendford, Yeovil. Telephone 1066.

### SALES BY TENDER

#### ACCRINGTON CORPORATION.

The above Corporation have for DISPOSAL a 500-gallon Mechanical Trailer Tyre Beater TAR SPRAYING MACHINE by Municipal Applications, Ltd. New 1958. Can be inspected any time at Willows Lane Depot, Accrington (Tel. 33150).

Offers to TOWN CLERK, Town Hall, Accrington, by SATURDAY, 6th August, 1960.

#### GREENHAM TOOL COMPANY.

TENDERS are invited for the PURCHASE of CHISELS, FILES, GOUGES, HOSE, OILCANS, PLIERS, RASPS, SOCKETS, SPANNERS, living at Aldridge, Staffordshire, and Isleworth, Middlesex.

Forms of Tender Conditions of Sale, and further particulars may be obtained from the address below. Sealed Tenders should be lodged not later than 12 Noon on WEDNESDAY, 17th August, 1960.

GREENHAM TOOL COMPANY.

618 London Road,  
Isleworth, Middlesex.

### SALES BY TENDER

#### DORSET COUNTY COUNCIL ROADS AND BRIDGES DEPARTMENT. DISPOSAL OF SURPLUS PLANT.

TENDERS are invited for the PURCHASE of the FOLLOWING:

- (a) One Ford 5-ton Tipping Lorry, Petrol, 4-wheel drive, GFX674. Ex W.D. Registered 1947. Running order.
- (b) One Ford 5-ton Tipping Lorry, Petrol, 4-wheel drive, CFX675. Ex W.D. Registered 1947. Running order.
- (c) One Ford 5-ton Chassis only, Petrol, 4-wheel drive, CIT696. Ex W.D. Registered 1947. Running order.
- (d) One Crossley Prime Mover, Petrol, 4-wheel drive, JFX820. Registered 1955. Ex W.D. Running order.
- (e) One Aveling-Barford 35cwt. Footpath Roller, Petrol, CPR86, new 1948. Running order.
- (f) One Aveling-Barford 35cwt. Footpath Roller, Petrol, CPR87, new 1948. Running order.
- (g) One Atlanta Water Pump, 2in. New 1948. Non-runner.
- (h) One Atlanta Water Pump, 2in. New 1948. Non-runner.
- (i) One Benjo Rammer. New 1947. Little used and in excellent order.
- (k) One Benjo Rammer. New 1947. Little used and in excellent order.
- (l) One Pegaso Road Breaker. 1938. Dismantled and in working order.
- (m) One Eagle Road Sweeping Broom, sweeps 6ft. width, towable by lorry or tractor. Good working order.
- (n) One Eagle Road Sweeping Broom, sweeps 6ft. width, towable by lorry or tractor. Good working order.
- (o) One Eagle Road Sweeping Broom, sweeps 6ft. width, towable by lorry or tractor. Good working order.

The above may be viewed by appointment with the Engineer, C. C. COOPER, Roads Department, Lane, Charminster, near Dorchester (Tel. Dorchester 1199), from whom further details may be obtained.

Offers, in writing, to be delivered in plain sealed envelopes, marked "Tender for Plant," to the CLERK OF THE COUNTY COUNCIL, County Hall, Dorchester, not later than SATURDAY, 13th August, 1960.

### ROYAL BURGH OF INVERNESS. FOR SALE.

One second-hand 2,000 g.p.m. Mather and Platt 100ft. head pulley drive CENTRIFUGAL PUMP, in good condition, although sold without a guarantee.

Further particulars and appointment to view from: WALTER ENGLAND, Town House, Inverness. Telephone: Inverness 2601.

The highest or any offer may not be accepted.

Sealed offers, in plain envelopes, endorsed "Sale of Pump," must be lodged with the undersigned on or before 12 Noon on SATURDAY, 17th September, 1960.

JAMES CAMERON,  
Town Clerk.

### BRENTWOOD URBAN DISTRICT COUNCIL.

OFFERS are invited for the PURCHASE of the FOLLOWING:

- One Pneu Footpath Roller.
- Type (new) One 500 20: Four 900 x 16: Two 900 x 22: One 600/60 x 19: Two 550 x 20: Two 33 x 5½: Two 32 x 6.
- Inspection arranged on application to Engineer and Surveyor. Offers, in envelope endorsed "Roller/Tyre" to reach me at Council Offices, Brentwood, by 1st AUGUST, 1960.

CLEMENT BOOTH,  
Clerk of the Council.

### RURAL DISTRICT COUNCIL OF CHELMSFORD.

#### FOR SALE.

OFFERS are invited for the PURCHASE of a Dodge Diesel 64P4 500 gallons capacity CESSPOOL EMPTY VEHICLE in good running order, together with 20 lengths of 6in. dia. 3in. Suction and delivery Hose. Tyres and Spare Wheel. This machine was registered in July, 1955, is licensed to the end of the year, and may be inspected by arrangement (Tel.: Chelmsford 3763) at the Council Offices, Car Park.

Offers, enclosed in a plain sealed envelope, and marked "Cesspool Empty" but bearing no other mark indicating the identity of the sender, to be delivered to the undersigned not later than Noon on WEDNESDAY, 3rd August, 1960.

C. A. BOHANNON,  
Clerk of the Council.

### GLAMORGAN RIVER BOARD. DISPOSAL OF PLANT.

TENDERS are invited for the PURCHASE of the FOLLOWING ITEMS OF PLANT, which may be seen by appointment:

- (1) N.C.K. 304 ¾yd. Dragline Excavator, Serial No. 1422, first registered May, 1952. This machine is on site at Ynys-y-gerwyn Farm, Aberdulais, near Neath.

(2) Priestman Tiger Mark V ½ cu. yd. Dragline Excavator, Serial No. A7225, first registered December, 1954. This machine is on site at Maen Farm, Machen, near Caerphilly.

Tenders must be received by the undersigned in plain sealed envelopes, bearing my mark to indicate the sender, and endorsed "Tender for Plant," not later than SATURDAY, 6th August, 1960.

The Board does not bind itself to accept the highest or any tender.

No forms of tender are available.

W. E. WRIGHT, M.I.C.E., M.I.W.E.,  
Tremains House,  
Cochrane Road,  
Bridgend, Glam.

### PROFESSIONAL SERVICES

**CIVIL ENGINEERING CLAIMS.**—Director/Consultant Engineer, with long and varied experience in high-level negotiation of contractors' claims, OFFERS SERVICES on a fee/commission basis.

Write Box P.P.392, "The Contract Journal."

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Just off the Fleet-Cove Road (B.3014), 1 mile from Fleet Pond, 3 miles from Farnborough Station, and immediately adjacent to the main railway to London.

An Important AUCTION SALE of several

ARMY BUILDINGS

—including

Three STEEL-FRAMED and ASBESTOS GARAGES of various dimensions; Two NISSEN-TYPE BUILDINGS, corrugated steel clad and lined; a large CIRCULAR STEEL BALANCING TANK, full size, 42ft. 6in. dia. x 20ft. high, constructed of bolted steel plates, with a capacity of about 175,000 gallons; CIRCULAR STEEL WATER STORAGE TANK, capacity about 12,000 gallons; Two Railway Goods Wagons: 750yd. run of Perimeter Fencing; and about 2,500yd. run of Copper Overhead Electric Light and Power Cable with Posts and Fittings.

**SCAMMELL AND SMITH** are instructed to sell the above by AUCTION, in lots, on the SITE, as above, on WEDNESDAY, 27th JULY 1960, at 12 Noon. On view two days prior to the Sale. Admission by catalogue (price 4d.) of the Auctioneers, The Auction Mart, Eastleigh, Hants. (Tel. 2201-3); and at Chandler's Ford, Hants.

By Order of the Receiver.

RE Peter Wooley (Sales), Ltd.; Peter Wooley Construction Co. Ltd.; and Peter Wooley and Sons, Ltd. (in Liquidation).

**BARNHAM, NEAR THETFORD, NORFOLK.**

**HENRY BUTCHER AND CO.** are instructed to offer for SALE by AUCTION at the WORKS on WEDNESDAY, 31st AUGUST, 1960, at 11 a.m., the

as a first lot,

**FREEHOLD FACTORY AND LAND** situated in RYMER LANE, BARNHAM, comprising substantial single-storey Buildings with newly erected Office Block, floor space about 33,500 sq. ft. ground area approx. 6 acres.

To be followed by the Sale of parts in detail of the ENGINEERS' AND CONTRACTORS' PLANT, EQUIPMENT AND MOTOR VEHICLES.

—including

RADIAL PILLAR and BENCH DRILLING MACHINES; S.S. and A.C. THERMAL WELDING and MILLING MACHINES; ARGON WELDING SETS; AIR COMPRESSORS; HYDRAULIC TRACK PIN and GARAGE PRESSES; Pumps; Jet Cleaners; Polishing Spindles; Electric Motors; Track Wrenches; Portable Cranes and Gantry Cranes; AUTOMATIC TRACTOR TYPE LINCOLNESE SET; Fork Lift Truck; Steel Truss; LE TOURNEAU SCRAPERS; WOBBLY ROLLERS; Trailers; Chassis Loaders; Elevators; Tractors; TOURNAPOUL DIESEL EXCAVATORS; TRACTOR SPARES and STORES; Engineers' Small Tools and Garage Equipment; Bedding; Storage Racks; Lighting Fittings; OFFICE FURNITURE; VANS and CARS. NOTE.—The Receiver is prepared to entertain offers for the works as equipped any time up to within seven days of the advertised date of the Sale. Prospective Contractors may obtain a detailed catalogue of the plant, machinery and equipment (when ready) may be obtained of: Messrs. DURRANT, COOPER AND HAMBLING, Solicitors, 70-71 Gracechurch Street, London, E.C.3; and of Messrs. HENRY BUTCHER AND CO., Auctioneers, Valuers and Surveyors, Factories, Plant and Equipment, 73 Chancery Lane, London, W.C.2. Telephone: HOLborn 8411 (2 lines).

### HORTICULTURAL

**TOP SOIL.**—200,000 cubic yards available, delivered in large and small quantities. Soil supplied ex site in approved cases.—LATHAM AND CO. (CONTRACTORS), LTD., Westward House, Guildford Rd., Lightwater, Surrey. Bagshot 2037 and 2400.

**A KEEN QUOTATION** for your TURFING, SEEDING and HEDGING CONTRACTS: London and Home Counties.—R. J. ENSTONE & SON, LTD., Head Office: 34 Alma Road, St. Albans. Tel. 55528.

**TURFING — SEEDING — HEDGING.** Quotations for all branches of landscape work, anywhere in the U.K. C.E. contracts for WEBSTER BROS., Horsforth, Leeds. Horsforth 2364.

**MASSEY-FERGUSON 65 TRACTORS** for HIRE, also comprehensive range of ATTACHMENTS, including Tiller, Trailers, Loader, Rotovator, and all Land Cultivation Implements, Turf-cutting Machines, etc. C.E. contractors catered for.—RINGWAY CONTRACTORS, LTD., Horsforth, near Leeds. Telephone: Horsforth 4805.

**TURVES.**—Machine-cut, 3ft. x 1ft., close mown, weed-treated, 60/- per 100. Keen trade rates. We would be pleased to quote for your levelling and laying.—E. R. RANCE, LTD., 24 Sheepcot Lane, Watford. Telephone: Garston 2725.

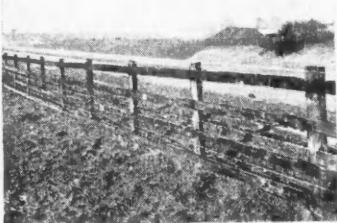
**YOUR THORNY PROBLEMS SOLVED.** Thorn Quick supplies will be low. Order next season's and early season's plants now. Lowest quotations and best deliveries.—ALFRED J. COX (GARDENS), LTD., Stoke Poges, Slough, Bucks.

**ROTARY CULTIVATORS** available for HIRE or CONTRACT WORK. Grading, Levelling, Earthmoving undertaken.—JAMES COOPER, LTD., 21 Kennington Church Street, London, W.8. Western 3412.

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More British timber is fencing Britain's roads. One of the many important contracts awarded to the Corporation was for 45 miles of fencing for the Doncaster by-pass.

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Home grown sycamore panels the first-class observation lounge of the "Queen Elizabeth". British oak was chosen for the state rooms of the "Mauretania". The hardwoods of Britain are among the finest in the world, and are used extensively in the construction of fishing vessels.

### FOR BRITAIN'S EXPORTS

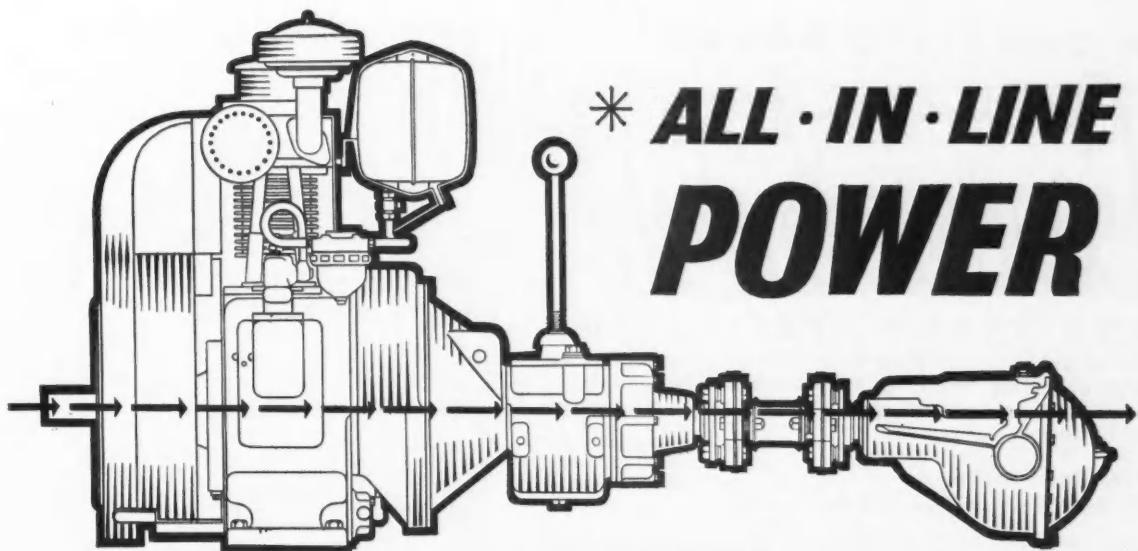


Britain's timber protects Britain's exports. In this rapidly expanding field, more and more firms turn to home grown timber, now made available through the Corporation in regular bulk supplies of guaranteed quality.

To put Britain's timber at the service of industry is the purpose of the Home Grown Timber Marketing Corporation Limited. Meeting modern industry's demand for controlled bulk delivery, the Corporation co-ordinates the resources of 300 member sawmills throughout Britain. Only through the Home Grown Timber Marketing Corporation can industry obtain home grown timber in bulk — with a guarantee of controlled delivery, at the right time, in accordance with buyers' requirements.

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**NO BELTS, NO CHAINS, NO POWER LOSS  
WITH THE ALL-IN-LINE TRANSMISSION  
SYSTEM IN THE FABULOUS -**

**LINER 'Roughrider'**  
REGD.



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**15 or 22½ cwt. DIESEL DUMPER**



The gearbox is capable of transmitting full engine torque in the indirect and reverse gears for very long periods and to withstand the heavy wear and tear of constant gear shifting under extremely arduous conditions.

All gears are in constant mesh, speed changes being effected by means of substantial multi-toothed dog clutches of gear tooth form which allow of quick and positive engagement of the required speed whether changing up or down.



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- Propeller shaft does not need lubrication.
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- Guards protect driver and working parts.
- Fully floating rear axle.
- Patented two-position skip.

**HIRE PURCHASE TERMS—ONLY 10% DEPOSIT**

**THE LINER CONCRETE MACHINERY CO. LTD.**

53, PARK ROAD, GATESHEAD, 8. Phone: 72501. Grams: "Liner, Gateshead"  
London Office & Showrooms: Liner House, Lexden Road, Acton, W.3.  
Phone: ACOrn 8931

Also at Birmingham, Manchester, Liverpool, Bristol,  
Leeds, Grantham, Accrington, Torquay, Glasgow, Dundee, Belfast, etc.

Please send full details of the Liner 'Roughrider'  
NAME .....  
ADDRESS .....

\* (Post this coupon without delay!)

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Of advanced design Blaw Knox Concrete Buckets ensure high operating efficiency. They are robustly constructed enabling them to stand up to the most arduous operating conditions.

**CLAMSHELL GATE**  
for general building construction

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for low slump concrete

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for mass concrete work

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for work on jetties, piers, etc.

For full details write for Publication 296



Large discharge opening  
permits rapid, clean but  
easily controlled discharge of  
concrete.



KENSINGTON 5151  
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**BLAW KNOX LIMITED** BOX 146, 90/94 BROMPTON ROAD, S.W.3.

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## Advertisements received too late for Classification

### GODMANCHESTER BOROUGH COUNCIL.

#### SEWERAGE SCHEME—CONTRACT NO. 2A.

TENDERS are invited, on a Fixed-price Basis, for the ABOVE WORK, comprising the CONSTRUCTION of about 430yd. of 6in. and 95yd. of 9in. SALT GLAZED WARE SEWERS, PRECAST CONCRETE MANHOLES, a SMALL PUMPHOUSE with 77yd. of 4in. Spun-Iron RISING Main, various House Connections, and appurtenant works, in the Borough of Godmanchester.

General Conditions of Contract, Specifications and Bill of Quantities may be obtained from the Council's Consultant Engineers, MESSRS. J. D. AND D. M. WATSON, MM.I.C.E., 67 Tufton Street, Westminster, S.W.1, on and after 29th JULY, 1960, on payment of a deposit of Ten Guineas, refundable on to contractors who submit bona-fide Tenders and return all documents and Drawings. Deposit cheques should be made payable to the Godmanchester Borough Council, or Order, and be sent to Messrs. J. D. and D. M. Watson, MM.I.C.E.

Sealed Tenders, endorsed "Tender for Sewerage Contract No. 2A," and bearing no name or mark indicating the sender, are to be delivered to the undersigned not later than Noon on FRIDAY, 26th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

PHILIP S. DAVIES, M.A.,  
Town Clerk.

Town Hall,  
Godmanchester.

### BOROUGH OF GRAVESEND. DEMOLITION OF PROPERTIES ROYAL PIER ROAD.

**FIXED-PRICE TENDERS**, returnable on the 22nd AUGUST, are invited from experienced demolition contractors for the DEMOLITION of PROPERTIES totalling approx. 150,000 cu. ft. capacity in ROYAL PIER ROAD.

Tender documents are available on application to the BOROUGH ENGINEER AND SURVEYOR, 6 Woodville Terrace, Gravesend.

### EAST GRINSTEAD URBAN DISTRICT COUNCIL.

#### BUILDING WORKS.

**FIXED-PRICE TENDERS** are invited for the MODERNISATION of NO. 80 and NO. 81, REED'S ROAD, East Grinstead, incorporating a ONE-STORY ADDITION comprising Kitchen and Bathroom, together with Maintenance Repairs and Internal and External Redecoration Works.

Drawings, Specification and Form of Tender, obtainable on application to MR. B. J. CORNELIUS, F.R.I.C.S., Surveyor to the Council, upon payment of a deposit of Two Guineas, returnable on receipt of a bona-fide Tender and the return of all documents. Tenders, returnable by Noon on SATURDAY, 13th August, 1960, to the undersigned, in the envelope provided.

The Council does not bind itself to accept the lowest or any Tender.

H. C. JONES,  
Clerk of the Council.

East Court,  
East Grinstead,  
Sussex.

### EAST GRINSTEAD URBAN DISTRICT COUNCIL.

#### SPORTS PAVILION.

**FIXED-PRICE TENDERS** are invited from firms specialist in the supply and erection of timber or prefabricated concrete buildings, in connection with a SPORTS PAVILION incorporating Changing Rooms, Washing and Sanitary Accommodation, and comprising Floor area of 1,670 sq. ft., to be provided at KING GEORGE V PLAYING FIELDS, East Grinstead. Outline drawings, Tender particulars and Form of Tender obtainable from MR. B. J. CORNELIUS, F.R.I.C.S., Surveyor to the Council, upon payment of a deposit of Two Guineas, returnable on receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes bearing no name or mark, indicating the sender endorsed "K.G.V. Pavilion," to be addressed to the undersigned, returnable by not later than Noon on SATURDAY, 20th August, 1960.

The Council does not bind itself to accept the lowest or any Tender received.

H. C. JONES,  
Clerk of the Council.

Council Offices,  
East Court,  
East Grinstead,  
Sussex.

### CEMAES RURAL DISTRICT COUNCIL. COAST PROTECTION WORK AT CWM-YR-EGLWYS. DINAS CROSS.

**FIXED-PRICE TENDERS** are invited for the CONSTRUCTION of approx. 670 lin. yd. of STEEL SHEET PILING 10ft. long, with REINFORCED CONCRETE CAPPING BEAM and APRON on the FORESHORE at Cwm-yr-Eglwys, situated about five miles east of Fishguard.

Copies of the Forms and Conditions of Tender, Conditions of Contract, Specification, Bill of Quantities, etc., may be obtained from the undersigned on payment of a deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender or the return of the documents before the closing date.

Tenders, in plain sealed envelopes endorsed "Cwm-yr-Eglwys Coast Protection Works," must be returned to the undersigned not later than the First Post on the 12th day of AUGUST, 1960.

The Council do not bind themselves to accept the lowest or any Tender received.

D. S. SMITH,  
Clerk of the Council.

Council Offices,  
Grovesnor Hill,  
Cardigan,  
15th July, 1960.

**SENIOR and JUNIOR SITE ENGINEERS and QUANTITY SURVEYORS** are REQUIRED for civil engineering and building contracts in England and Wales. These are permanent appointments with good prospects. Bonus and superannuation schemes in operation.—Applications, which must be submitted in strict confidence, must give details of age, experience, qualifications and salary required, and should be addressed to Personnel Officer, TARMAC CIVIL ENGINEERING, LTD., Ettingshall, Wolverhampton.

### ADMINISTRATIVE COUNTY OF LEICESTER.

TENDERS are invited for the SUPPLY and ERECTION of FIVE 40-TON GRITTING HOPPERS, in accordance with documents available from the County Engineer, and Surveyor, County Offices, Grey Friars, Leicester, on deposit of £5.

Closing date: 19th AUGUST, 1960.

J. A. CHATTERTON,  
Clerk of the County Council.

Grey Friars,  
Leicester.

14th July, 1960.

### ROYAL BOROUGH OF KINGSTON-UPON-THEMES.

#### KINGSTON GRAMMAR SCHOOL PLAYING FIELDS, THAMES DITTON.

#### SITE CLEARANCE, FILLING AND GRADING.

TENDERS are invited for the SITE CLEARANCE of 17.12 acres. EXCAVATION of TOPSOIL, USE of SITE, of DEPOSIT of 85,000 cu. yd. approx. of FILL, SPREADING TOPSOIL, GRADING and SEEDING.

Contract documents from Borough Surveyor, Guildhall, Kingston-upon-Thames, on deposit of £2 2s., returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders to undersigned not later than First Post on TUESDAY, 16th August, 1960.

L. V. POWELL,

Town Clerk.

Guildhall,  
Kingston-upon-Thames.

### HORNCHURCH URBAN DISTRICT COUNCIL.

#### REBUILDING OF TWO B.I.S.F. HOUSES—RAVENSBOROUGH CRESCENT, HAROLD WOOD.

Contractors wishing to TENDER for the REBUILDING of Two Fire-destroyed IRON and STEEL HOUSES at RAVENSBOROUGH CRESCENT, HAROLD WOOD, are requested to submit their names to the undersigned not later than 2nd AUGUST, 1960. It is anticipated that the Bills of Quantities, Specification and Drawings will be available by 31st JULY, 1960.

P. L. COX,  
Clerk of the Council.

Council Offices,  
Hornchurch.

### IRLAM URBAN DISTRICT COUNCIL.

#### PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of part of ALLOTMENT ROAD, CADISHEAD.

Plans and Conditions of Contract may be seen and Specifications, Bill of Quantities and Form of Tender obtained from the Engineer and Surveyor, Council of Irlam, Lancs. Upon payment of a deposit of One Guinea, returnable upon the receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, in the envelopes provided, must reach the CLERK OF THE COUNCIL, Council Offices, Irlam, not later than FRIDAY, 12th August, 1960. The Council do not bind themselves to accept the lowest or any Tender.

NIDDERDALE RURAL DISTRICT COUNCIL.

#### RUFFORTH SEWERAGE SCHEME.

TENDERS are invited for LAYING of approx. 3,300yd. of 9in. and 6in. SEWER, and 4in. RISING MAIN, with Manholes and ancillary works.

Plans and Specifications may be inspected at the Office of the Consulting Engineer, W. K. RODWELL, 20 North Street, Derbyshire, from whom Bills of Quantities may be obtained on payment of a deposit of Two Guineas by cheque, made payable to Nidderdale R.D.C., which will be returned on receipt of bona-fide Tender not later withdrawn.

Tenders, in plain sealed envelopes endorsed "Rufforth Sewerage Scheme," to reach the undersigned by Noon on 7th SEPTEMBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. ROGERS,  
Clerk of the Council.

Claro Chambers,  
Knaresborough,  
July, 1960.

### MERIDEN RURAL DISTRICT COUNCIL.

#### PARISH OF MERIDEN.

#### HAMPTON LANE AND MAXSTOKE LANE SEWERAGE SCHEME.

TENDERS are invited for the CONSTRUCTION of approx. 950 lin. yd. of 6in. dia. GLAZED STONEWARE PIPE LINE, together with PRECAST CONCRETE MANHOLES and all ancillary works.

Drawings may be inspected at the Office of the Engineer and Surveyor, Old Vicarage, High Street, Colehill, Birmingham, and documents may be obtained from the same address upon the payment of a deposit of Two Guineas, which will be refunded upon receipt of a bona-fide Tender.

Tenders must be delivered in envelopes which will be supplied with the documents, to the undersigned not later than Noon on SATURDAY, 10th September, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

RAYMOND E. HALE,  
Clerk of the Council.

Old Bank House,  
Colehill,  
Birmingham.

### DRAUGHTSMAN REQUIRED with reinforced concrete and formwork detailing experience. This is a permanent appointment with good prospects.

Applicants must give details of age, experience, qualifications, and salary required, and should be addressed to Personnel Officer, TARMAC CIVIL ENGINEERING, LTD., Ettingshall, Wolverhampton.

A SSISTANT SURVEYOR WANTED, capable of land surveys and plotting, and design of roads and sewers sections, etc. Good salary, pension schemes, luncheon vouchers, etc.—Write Chief Land Surveyor, Box V.2370, "The Contract Journal," or "Phone Perivale 4446 L.A.W."

SURVEYOR REQUIRED by WILLMENT BROS., LTD. Please apply in writing, to 462 London Road, Isleworth, Middlesex.

FOR SALE, D4 2T. with Hydraulic Dozer, in really first-class condition, £1,000.—Phone: Rickmansworth 5235.

### CHESHIRE COUNTY COUNCIL.

#### SHREWSBURY-WHITCHURCH-WARRINGTON TRUNK ROAD, A.49.

#### IMPROVEMENT AT NORCOTT BROOK.

TENDERS are invited for WIDENING the ABOVE ROAD for a length of approx. 600 lin. yd. The works include Fencing, Drainage, Earthworks, Kerbing, Carriageway and Footway Construction.

Form of Tender, Conditions of Contract, Specification, Bill of Quantities and Plans may be obtained from the undersigned on payment of Five Guineas by crossed bankers, which will be returned in the case of a bona-fide Tender not subsequently withdrawn, submitted to the Clerk of the County Council, County Hall, Chester, in a plain sealed envelope endorsed "Improvement at Norcott Brook," not later than Noon on MONDAY, 15th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

C. G. DAY,  
County Surveyor and Bridgemaster.

County Surveyor's Department,  
Backford Hall,  
Nantwich,  
Cheshire.

14th July, 1960.

### NORFOLK COUNTY COUNCIL.

#### HIGHWAYS DEPARTMENT.

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING:

7,500 lin. yd. run of Timber Fencing, consisting of Split Chestnut Posts mortised to take four round larch rails, to site at Scotton, Norfolk.

Full details are contained in the Form of Tender, obtainable on application to the County Surveyor. Completed Tenders must be submitted to the CLERK OF THE COUNCIL, County Offices, Thorpe Road, Norwich, by noon on a date not later than Noon on WEDNESDAY, 10th August, 1960.

County Surveyor,  
Thorpe Road,  
Norwich,  
Norfolk, NOR. 47A.

### COUNTY BOROUGH OF SWANSEA.

#### REMOVAL OF CONCRETE BLOCKS ALONG FORESHORE BETWEEN BLACKPILL AND OYSTERMOUTH.

The CORPORATION invites a FIXED-PRICE LUMP-SUM TENDER for the REMOVAL of 237 CONCRETE BLOCKS, approx. size 5ft. x 5ft. x 5ft. (approx. weight 8 tons), and Burying the Blocks in the Foreshore.

The Drawings may be inspected at the Office of the Borough Engineer and Surveyor, The Guildhall, Swansea, from whom copies of the Conditions of Contract, Schedule of Works and Conditions of Tender may be obtained on deposit of the sum of £2, which will be returned to bona-fide tenderers.

Tenders, in plain sealed envelopes not bearing any name or mark, should be addressed to the undersigned and endorsed "Removal of Concrete Blocks," should be delivered or sent by Registered Post so as to reach me not later than MONDAY, 15th August, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

JORWERTH J. WATKINS,  
Town Clerk.

The Guildhall,  
Swansea.

July, 1960.

### BOROUGH OF KIDDERMINSTER.

#### (AMENDED ADVERTISEMENT.)

#### ENGINEERING CLERK OF WORKS.

APPLICATIONS are invited for the ABOVE TEMPORARY APPOINTMENT, to start in accordance with A.P.T. Grade II (£765-£880).

Applicants should be experienced in the supervision of large sewerage and road works, preferably in a Municipal Engineer's Department. Subject to satisfactory service, this appointment will be for a minimum period of one month.

Applications, giving full particulars and concise details of experience, and accompanied by the names of two persons to whom reference may be made, must be delivered to the undersigned not later than MONDAY, 8th August, 1960.

J. G. STEWART,  
Borough Engineer and Surveyor.  
110 Mill Street,  
Kidderminster,  
Worcestershire.

16th July, 1960.

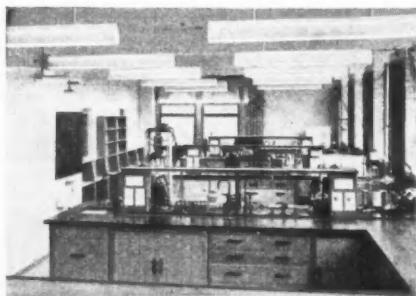
**T**HE Gammon Group of Civil Engineers and Reinforced Concrete Specialists has the following vacancies for technical staff in India: (a) SENIOR SITE ENGINEERS/AGENTS—Age group 30-40 years. Commencing salaries from £1,000 per annum. Must be qualified and practical Engineers with at least five years' experience as a contractor's Site Engineer, Agent or Sub-Agent; (b) SENIOR AGENTS/DISTRICT ENGINEERS and AREA MANAGERS—Age group 35-45 years. Commencing salaries from £1,000 per annum. Must be qualified and have a number of years' experience in senior positions as Agent or Contracts Manager with leading contractors. Previous experience in the East is desirable. The above appointments are on the permanent staff, leading ultimately to top executive positions. They offer wide scope to Engineers with ambitions and drive to move to India with opportunities for advancement in the East. Apply in writing, giving full particulars, to J. C. GAMMON (ENGLAND), LTD., 202 Sloane Street, London, S.W.1.

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**LAND FOR BUILDING**

FEW building topics have hit the headlines so dramatically as the shortage of building land.

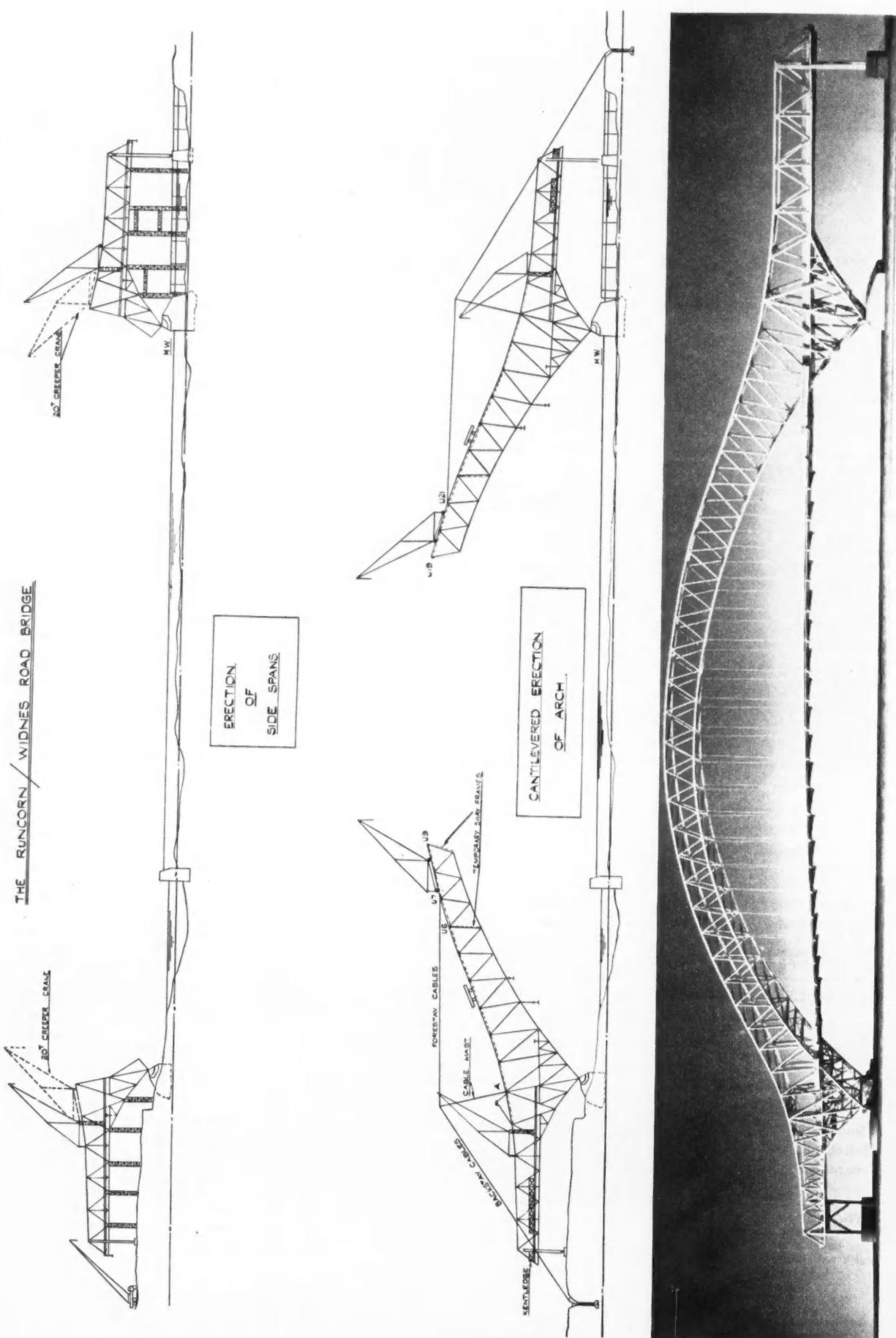
The president of the Royal Institute of British Architects has referred to speculators cornering the limited supply of land in Great Britain and "holding the community to ransom." The National Federation of Building Trades Employers has called for immediate Government action to meet what it describes as a crisis situation; the Federation argues that it has facts and figures to prove that, by 1963, a substantial percentage of its housebuilding members are unlikely to have any land at all upon which to build. Mr. Gaitskell has demanded the control of land values by the nationalisation of urban sites, while the Government has reaffirmed its faith in a free market for land and has refused to budge in its Green Belt policy. The Liberal Party argues that the only way to force more land onto the market is to tax the site value of all land not restricted by town planning from development. In the background are the local planning authorities, and others, jealously guarding the Green Belts.

Naturally, attention has been largely directed towards land for house-building; but no section of the industry can stand aside from this vital issue. Whatever may be decided for housebuilding is bound to affect the availability of land for other users. The reasons behind the present position are not difficult to find; indeed the wonder is that they have not been voiced much earlier. They are the limited amount of land around towns and cities; the planning control introduced since the war and the now largely out-of-date development plans derived from them; increasing population; earlier marriages; smaller households; the dispersal of the population; the archaic road system; rent restriction, encouraging people to remain in properties larger than their needs; the perhaps too rigid application of the Green Belt Policy; the needs of agriculture; and so on. Each constitutes a major problem in itself. Collectively they explain a crisis that could lead to a great industry grinding to a standstill in the none too distant future for want of an essential raw material. If the interests quoted earlier differ radically as to the solution, they all agree in one respect—the most important; that something has got to be done, and without delay.

Land nationalisation would certainly not solve the problem; indeed, it could only aggravate it by making it a major party political issue. By itself it would not make one extra acre of building land available. Taxation of site values might achieve something; but such gimmicks have a habit of adjusting themselves so that in the end no one, or no thing, is any better off, and, in any case, it is bound to result in gross anomalies. The N.F.B.T.E. proposal for an official working party to examine the whole problem would seem to offer the best prospects, even if it does smatter a little of bureaucracy. At least it has the advantage that all interests (and not all the arguments are on the side of the builders) would have their say. But to prove effective such an approach cannot be confined to local plans, Green Belt policy and the like, which seem to mark the limit of Government thinking at the moment. It must encompass all types of land.

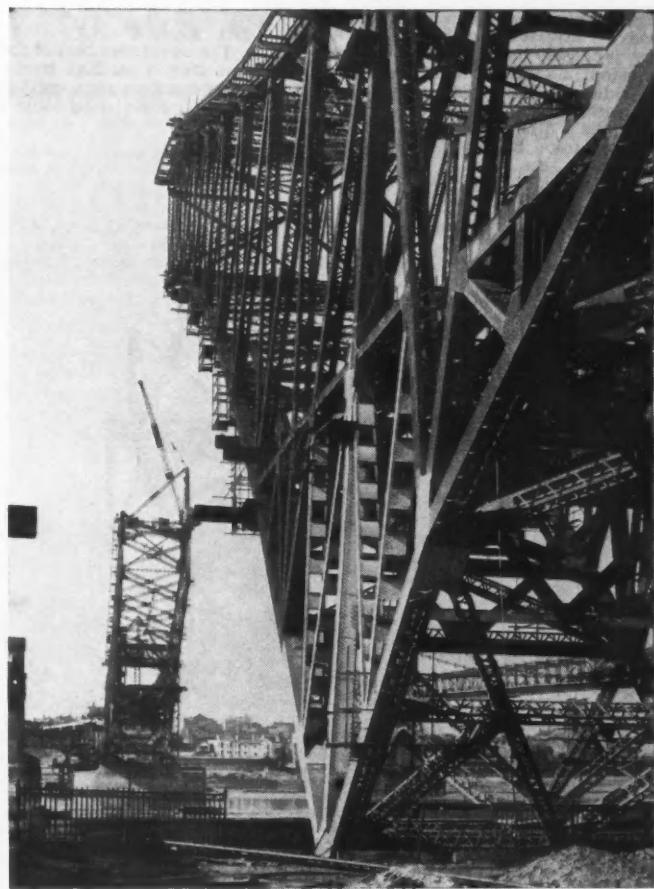
Agriculture for one cannot contract out for it has been calculated that in the next 20 years the transfer of a mere 2½ per cent. of the land now used for agricultural purposes would solve the building problem. The working party would certainly require to investigate whether the best use is at present being made of agricultural land. Although this industry must hold most of the land area for its own purposes it can never claim an exclusive right, especially in a country where the land area in relation to need is very limited. A criticism often made is the small size and poor layout of farming units in an era of mechanisation.

Are these thoughts worth investigation? A comprehensive review would take a little time, and time is short. But only a full examination can lead to a reconciliation of the conflicting views that now exist.



## RUNCORN-WIDNES BRIDGE UNDER CONSTRUCTION

**Arch Span Will Be  
Europe's Longest**



View from Runcorn, showing materials track on west upper chord

SCHEDULED for completion next spring, the £3m. Runcorn-Widnes Bridge now being constructed across the River Mersey and Manchester Ship Canal is designed to replace the existing transporter bridge which has given a

considerable amount of trouble over the years, principally because of corrosion.

Originally, various types of structures were considered, including multi-span truss and suspension bridges. Following objec-

tions by the Manchester Ship Canal Company regarding the possible scouring of their retaining wall, a suspension bridge was suggested and tests were undertaken on sectional models to ascertain the aerodynamic stability. At the last moment the consultants, Mott, Hay and Anderson, dis-



View from Widnes

covered that the adjoining railway bridge had an adverse effect on the stability of the proposed bridge and it was decided to adopt a scheme for an arch structure, providing a 33ft. carriageway and two 6ft. footpaths. After tenders had been invited by the Runcorn-Widnes Joint Bridge Committee the contract was awarded to Dorman Long (Bridge and Engineering), Ltd.

The main bridge consists of a steel arch span of 1,082ft. and two steel side spans, continuous with the main span, each of 250ft. On completion, this will be the longest arch span in Europe and the third longest in the world, the other two being the Bayonne Bridge over the Kill Van Kull, N.Y. (1,652ft.) and Sydney Harbour Bridge, Australia (1,650ft.), the latter also having been constructed by Dorman Long.

The Runcorn approach viaduct commences with a round-about at Greenway Road where it will junction with a new road leading towards Northwich which is being constructed by the Cheshire County Council. The viaduct consists of two steel plate girder bridges over the Bridgewater Canal and High Street, Runcorn, with spans of 108ft. and 50ft. respectively, 13 reinforced concrete spans, varying in lengths from 70ft. to 81ft. 6in. and a plate girder span adjoining the main bridge of 65ft.

The Widnes approach viaduct commences at Church Street, Widnes, where it will junction with a further viaduct and embankment which is being constructed by the Lancashire County Council. It consists of a section of fill, retained by reinforced concrete walls, six reinforced concrete spans of 83ft. and a plate girder span adjoining the main bridge of 87ft. The total length of the works is 4,400ft.

#### Main Bridge Foundations

These foundations were carried out by Leonard Fairclough, Ltd., as a separate contract before the contract for the main bridge was let.

At Runcorn, the main pier carrying the thrust of the arch has been constructed on the shore adjacent to the Manchester Ship Canal bank. This pier is founded on soft red sandstone, 14ft. below the level of the canal. It is mainly of mass concrete construction and contains 4,000 tons of concrete.

On the Widnes side, the main skewback pier and the pier supporting the end of the side span are sited on the foreshore of the River Mersey, where there is a tidal rise of 20ft. at spring tides. These piers were built inside steel sheet pile cofferdams. The skewback pier cofferdam had internal dimensions of 140ft. by 70ft. As at Runcorn, the Widnes piers are founded on soft red sandstone, which forms the bed of the river, and are mainly of mass concrete construction. The main skewback pier contains 7,500 tons of concrete.

#### Arch Structure

The arch has a rise of 253ft. from the bearing to the top of the trusses at the crown. The distance between the trusses is 54ft. The depth of the truss at the

springing is 106ft. and at the crown is 35ft. 3in.

The chord members of the arch and side span trusses are high tensile steel and the other members are normal mild steel. The trusses are of riveted construction.



Widnes half arch with creeper crane erecting lower chord staggings

Loads from the arch are transferred to the foundations through 14in. diameter forged steel pins.

The deck is suspended from the arch by means of locked coil wire ropes, 2½in. diameter. The cross girders and stringers are welded and are made of high tensile steel. The road and footpaths are of concrete construction. The roadway deck is

7½in. thick and is surfaced with 2in. asphalt.

The total weight of steel in the main bridge is 5,600 tons of which approximately 50 per cent. is high tensile. There are approximately 180,000 site rivets in the structure and some 5,000ft. of locked coil wire ropes are incorporated in the permanent suspenders.

#### Erection

Erection is being carried out from both sides of the river in the following sequence: (1) side span; (2) arch; (3) suspenders and heavy deck steel; (4) light deck steel.

Erection commenced at the main bearings and the side spans were completed by working away from the river on both sides. The structure was supported on temporary trestles until the spans were completed and self-supporting, when the trestles were removed.

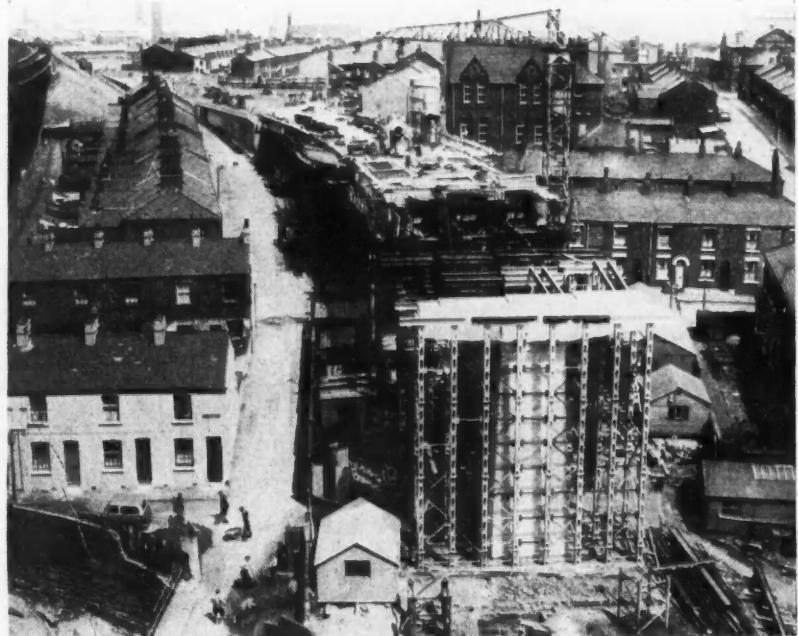
On the Runcorn side erection was carried out using first a 20-ton derrick in a fixed position and subsequently a mobile crane of 25-ton capacity. On the Widnes side a 20-ton derrick on 100ft. gabbards was first used; this derrick then erected a second derrick on the structure which completed the erection of the span.

Erection of the arch on each side is being carried out by means of a 20-ton derrick mounted on a purpose made carriage on top of the arch. The carriage is on wheels which run on the top chord and allow the crane to be winched forward up the arch as erection proceeds. There is also an adjustable leg on the carriage which allows the derrick to be maintained in a horizontal position irrespective of the slope of the arch rib.

An additional derrick is mounted on the top of each side span which lifts material from the ground onto a bogie running on a track cantilevered out from the West Top Chord. By this means and by extending the track as erection proceeds, material is transported to the creeper crane at the head of erection.

Work has now reached the stage where it is necessary to anchor the cantilevered half arches to each bank. This is done by means of forestay cables attached to the upper chord and to the top of the temporary cable masts which are standing on the top chord. Backstay cables which are anchored in the rock at each side of the river are also connected to the top of the cable masts where provision is made for jacking loads into the various cable lines.

(Concluded on page 316)



Widnes approach viaduct

## ROSS MOTORWAY NEARS COMPLETION

### 41 Bridges Constructed on 22½-mile Route

**D**UE to be opened in October, the £6m. Ross Motorway, which will contain 41 bridges in its 22½ miles of dual carriageway, is now 85 per cent. completed.

To replace the steep and narrow roads at present used by industrial traffic travelling between Wales and the Midlands, it will ultimately link with the Birmingham-Bristol Motorway, the northern part of which is now under construction. At its western end it will by-pass Ross and lead on to Swansea and Neath by way of the reconstructed Heads of the Valleys Road, to Newport, Cardiff and beyond via the A.449 and A.48 roads.

The motorway itself extends from A.38 (the Birmingham-Worcester-Tewkesbury-Gloucester trunk road) to A.449 (the Worcester-Malvern-South Wales trunk road). From the motorway junction with A.449, the trunk road has been improved and a by-pass built north of Ross-on-Wye, terminating at Wilton and connecting with the A.40 and A.49 Gloucester-Ross-Herford trunk road.

The northern part of the Birmingham-Bristol Motorway together with the Ross Motorway and the improvement of the existing trunk roads from Wilton to South Wales via Raglan forms one of the five major road improvement schemes which the Minister of Transport has indicated as the basis of his national road plan.

The total length of motorway from Brockridge Common to the A.449 junction is approximately 21 miles, while the "all-purpose" road improvement and Ross By-pass is another 1½ miles, making a total length of 22½ miles for the present scheme. Apart from its terminal connections with A.38 and A.449, the motorway will have only two intermediate connections, one with A.417 (Gloucester-Ledbury) and the other with B.4221 (Hereford-Gloucester via Newent).

Within its effective width of 88ft., the motorway has dual 24ft. wide carriageways and a central reservation 15ft. wide. White marginal strips a foot in width mark the edges of the carriageways. The maximum gradient is 1 in 25, and it is designed for speeds of up to 70 m.p.h.

About 2,250,000 cu. yd. of rock and soil have been excavated over the route.

A feature of the scheme is the two major

bridges, one over the Severn at Queenhill and the other over the Wye at Bridstow.

The Queenhill Bridge, together with its approach viaducts, covers a total length of 2,466ft., and is costing over £14m. It is a three-span continuous steel girder bridge with a centre span of 240ft. (headroom 44ft.) and two side spans of 130ft. each.

Piers for the bridge and viaduct were carried down to rock marl by means of 54 steel caissons using compressed air, the depth below ground varying between 28ft. and 47ft.

The bridge is not due for completion until next spring, but, in order to make the motorway available for traffic before



The motorway seen from Jay's Green, as it passes through the Dymock Forest

Of dual construction, it is 73ft. wide overall, each half-width having two pairs of girders with reinforced concrete decking. The approach viaducts consist of 24 spans of 84ft. each, 15 on the east side of the bridge and nine on the west. Also of dual construction, each carriageway is carried on a line of cellular tee beams supported on a single line of columns, all in reinforced concrete.

this, it has been decided to open one of the carriageways at the beginning of October, when the other contracts will be completed.

The Queenhill Bridge is being built by A. E. Farr, Ltd., of Westbury, Wilts. Sir Alexander Gibb and Partners, are consulting engineers, and Sir William Holford and Partners are the consulting architects.

At the other end of the motorway—



The Bridstow Bridge, showing cranes used in construction

actually on the Ross By-pass—the road is carried over the River Wye by the Bridstow Bridge, with its associated embankment 2,000ft. long over the river's flood plain. The embankment has a maximum height of 33ft., through which seven flood relief arches are pierced. Each flood arch is itself a considerable structure, being over 80ft. long and having a span of 18ft.

This bridge is a three-span structure with a total length of 353ft. It has a 203ft. clear span in the centre and two approach spans each 75ft. long. The bridge structure carries dual carriageways and is supported by two reinforced concrete piers, one on either side of the river, and reinforced concrete abutments which also terminate the structure at either end. The deck consists of prestressed concrete approach and cantilever spans supporting the prestressed concrete suspended centre span. Nine main beams support the concrete deck slab. The mass concrete pier foundations are continuous, and extend some 16ft. below the river level down to the sandstone.

#### Special Technique

Whereas the main structure of the bridge is of reinforced concrete cast in situ, the central beams were precast and pretensioned, actually on the motorway site, and a special technique had to be employed to place them quickly and economically.

The equipment used for this part of the operation comprised a triple/single bailey bridge, a rail track and bogies, and two lorry-mounted cranes of 40-ton and 50-ton capacities, supplied and operated by the mobile lifting services division of Tarslag, Ltd., Rotherham.

One crane first placed the bogies on the rail track and then both cranes worked together to lift two of the beams on to the bogies.

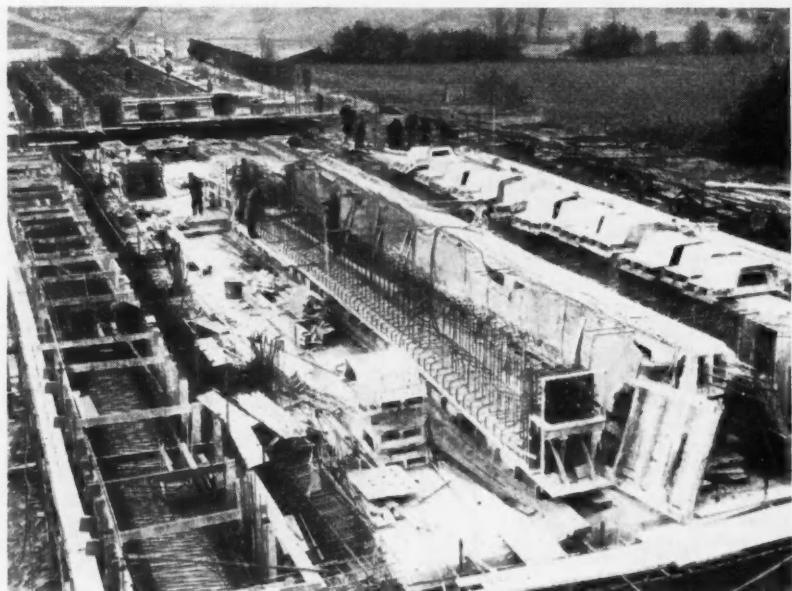
While the 50-tonner travelled to the western approach, the first beam was drawn on to the bailey bridge by a winch. The two cranes then lifted the beam off the bogies and placed it in position linking the cantilever spans. The beam was secured between the cantilever spans by a rocker bearing at one end and a roller bearing at the other.

The bogies which had carried the first beam were stacked by the 50-ton crane on the western approach and the second beam was drawn, on its bogies, on to the bailey bridge from which it was placed in position between the cantilever spans. All the bogies were then returned to the east end of the track to which the 50-ton crane also travelled by way of Ross.

This operation was repeated with each pair of beams and with the odd beam. The only interruption in the sequence was to dismantle part of the rail track and to lift the bailey bridge from one side of the central arch to the other, using the two cranes.

The Bridstow Bridge, now 90 per cent. complete, is being built by Tarmac Civil Engineering, Ltd., with Scott and Wilson,

at Jay's Green on a continuous span beam and slab concrete bridge; the arch at Beaconhill, carrying B.4215 across, was designed with a fully open spandrel, fitting naturally the different levels of the two roads at this location; the Kempsey Bridge comprises six open spans, two of them over the motorway, which is itself 3ft. above natural ground level at this point, these additional spans saving filling and avoiding



Construction of Bridstow Bridge, showing some of the prestressed main beams in the foreground

Kirkpatrick and Partners, as consulting engineers and Ansell and Bailey, as consulting architects.

#### Fly-overs and Fly-unders

The motorway has no connection with other roads except at two points; it therefore passes either under or over these roads by a series of bridges—36 of varying size and importance, as well as three on the by-pass. To blend with the prevailing colour of the countryside the bridge abutments in the Herefordshire sector are faced with red sandstone from local quarries.

There is a wide variety in design, some examples of which are as follow: The Ross Newent Road, is carried over the motorway

obstruction of the view by an embankment which would have to be more than 20ft. high; another bridge is the 90ft. span segmental arch of reinforced concrete with masonry-faced spandrels, carrying a class III road over the motorway at Rudhall; the Pull Court overbridge is faced with artificial stone, and others have brick-faced wing walls.

#### Main Contractors

The Ross Motorway and the "all-purpose" trunk road Ross By-pass together form one scheme, which has been divided into four contracts, all of which are now well in hand. More than 1,200 men were employed on the scheme, when work was at its height.

#### Contract No. 4

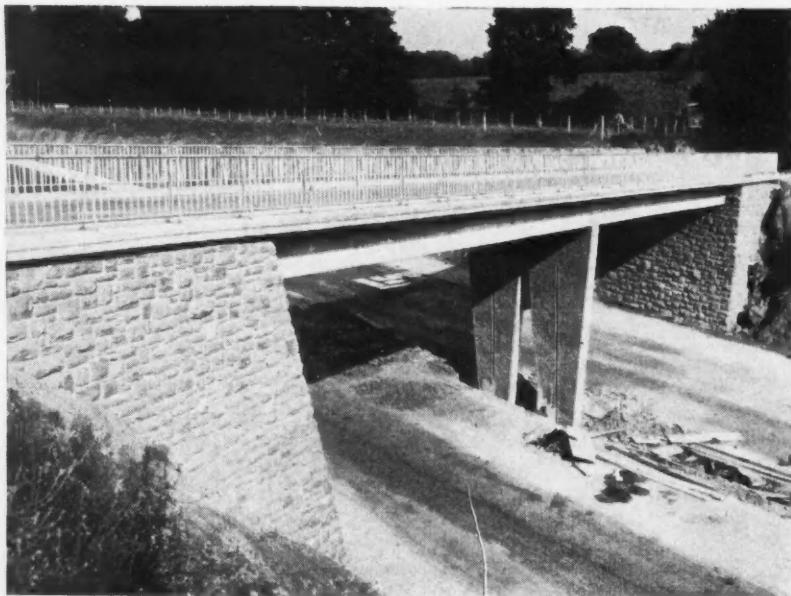
This contract, mainly in Worcestershire, comprises the road and bridge works between the temporary connection with A.38 at Brockridge Common (Gloucestershire) and the Gloucester-Longdon Road (B.4211). Included are the very extensive bridge works and viaducts over the River Severn at Queenhill, the viaducts at Bushley and Ripple, and the Ripple road and railway crossing.

Eight inches of crushed stone are used for road construction in this sector, with a gravel sub-base extending under the full width of the hard shoulders. The running surface will be of hot rolled asphalt. Contractors are A. E. Farr, Ltd., and, apart from the Queenhill Bridge and another road and rail crossing, all the roadworks and bridges have been designed by the agent authority, Worcestershire County Council (county surveyor, W. R. Thomson, M.I.C.E., M.I.Mun.E.).

#### Contract No. 3

Contract No. 3 runs from the Gloucester-Longdon road to the flyover junction with the Ledbury-Gloucester road (A.417) near Bury Court, just across the Gloucestershire boundary. Here the soil is mainly Keuper marl or silty clay, and the carriageway foundations are of soil-cement with a layer of cement-stabilised gravel and a hot asphalt running surface.

(Concluded on page 310)



The abutments of Linton Bridge are faced with local red sandstone





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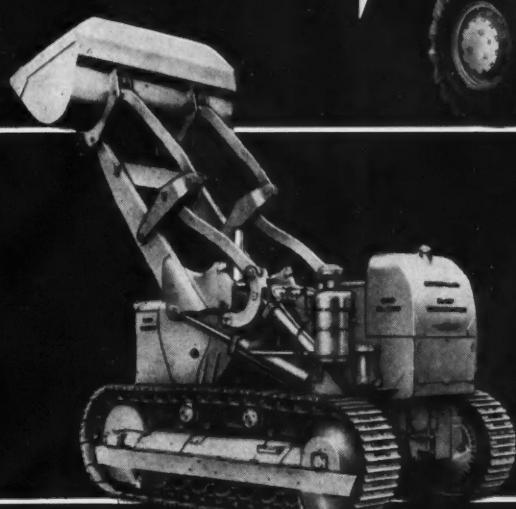
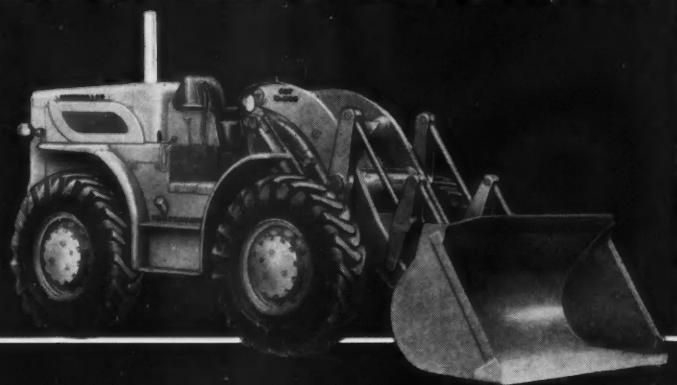
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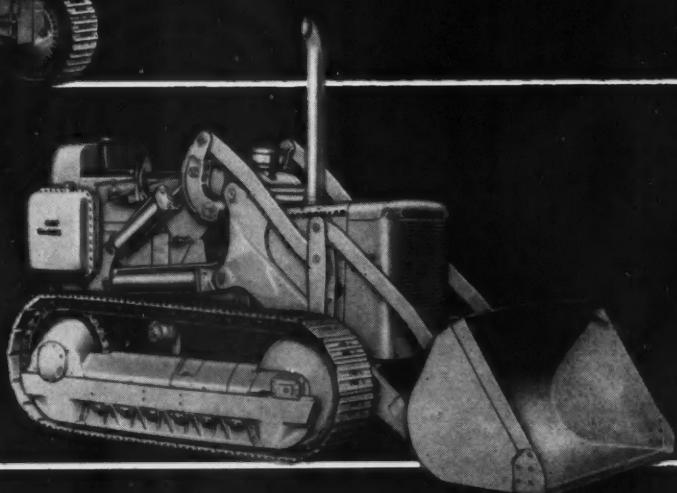
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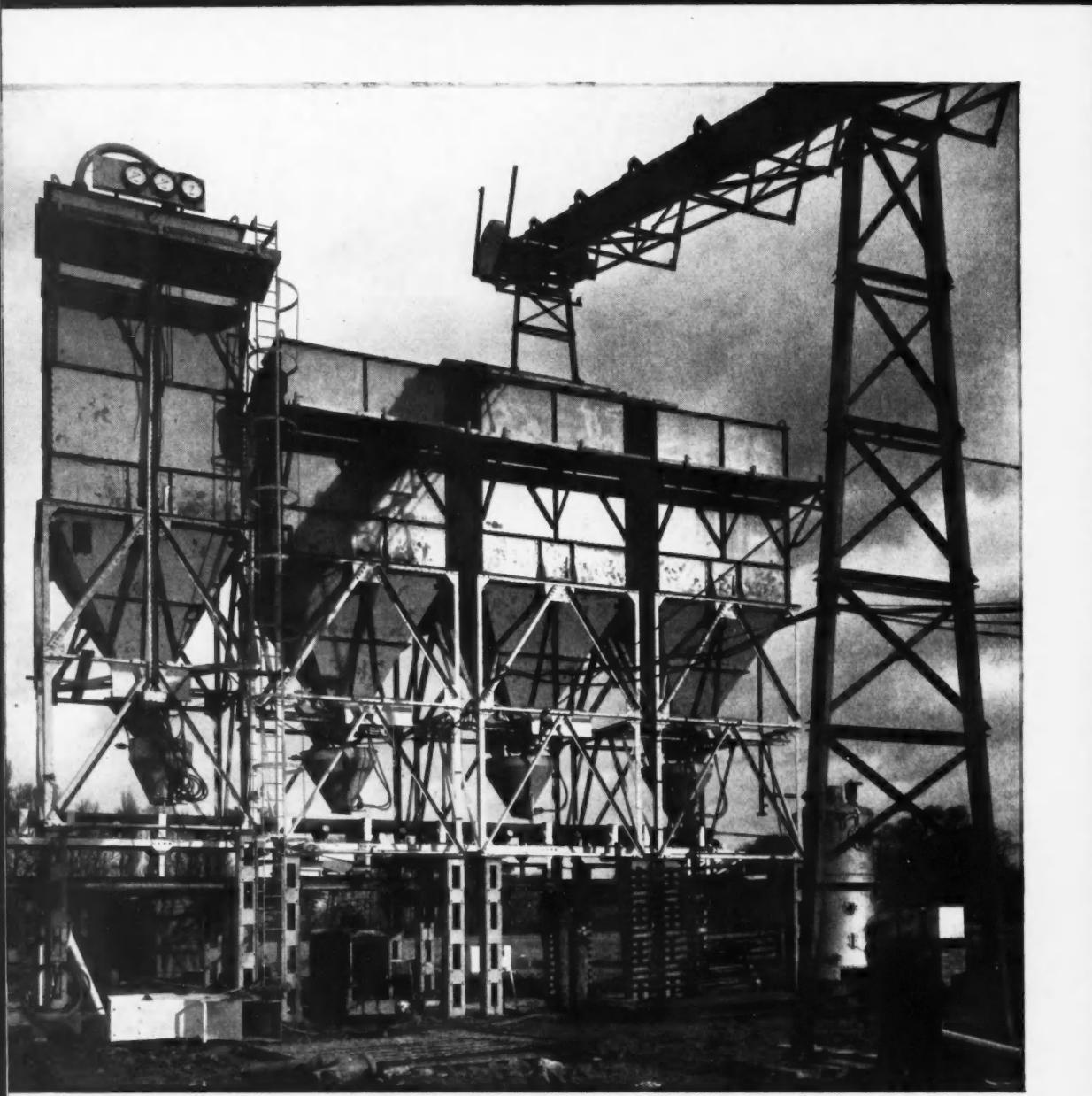
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# STEEL ROAD FORMS

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## **TRACK TYPE**

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## **Dual-Purpose TRACK TYPE**

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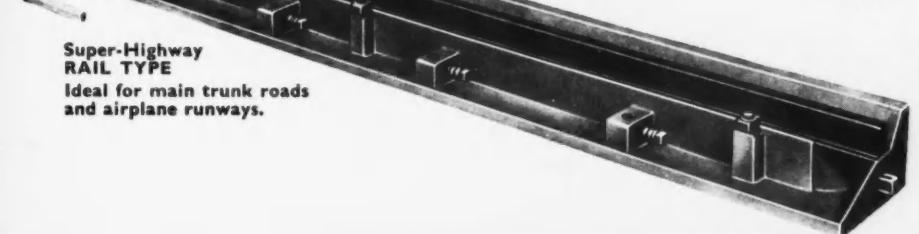
## **RAIL TYPE**

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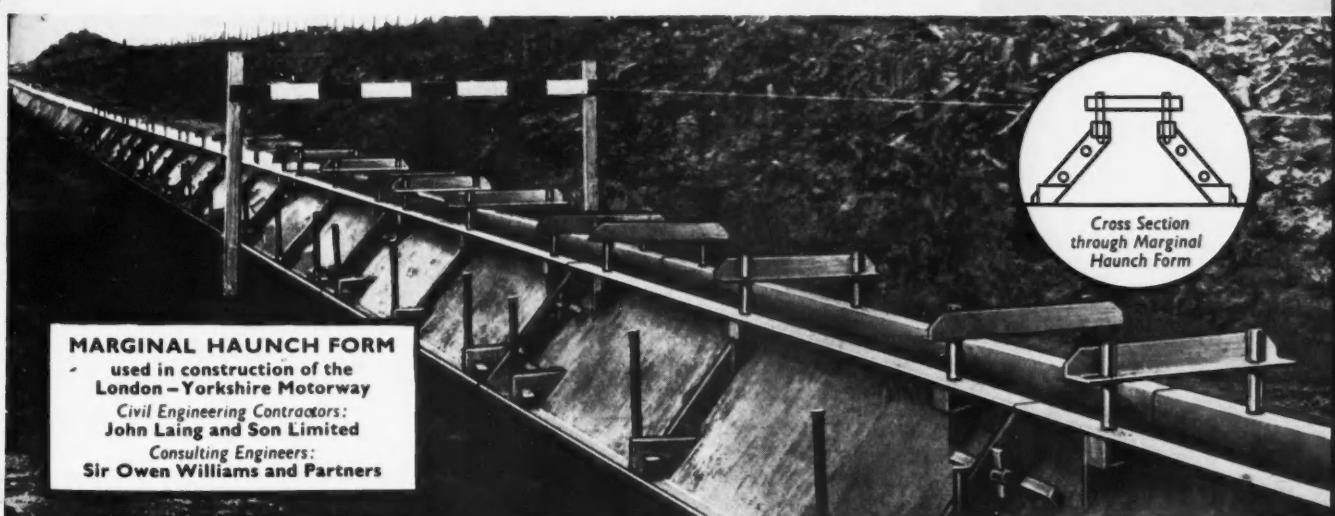
## **Super-Highway RAIL TYPE**

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## **MARGINAL HAUNCH FORM**

- used in construction of the London - Yorkshire Motorway
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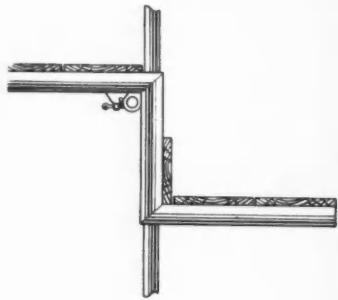
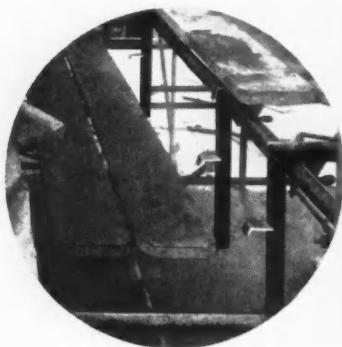
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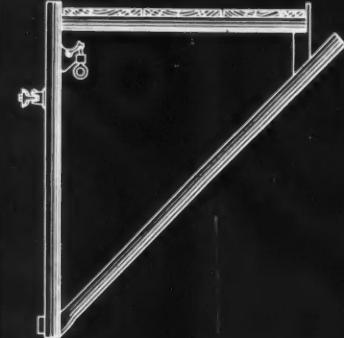
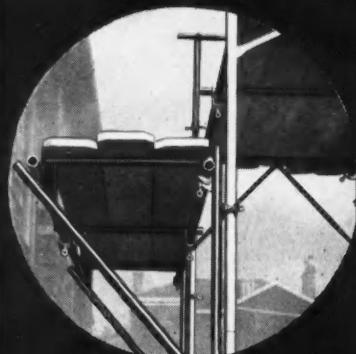
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- \*Gives ideal working platform 18" below level of brickwork.
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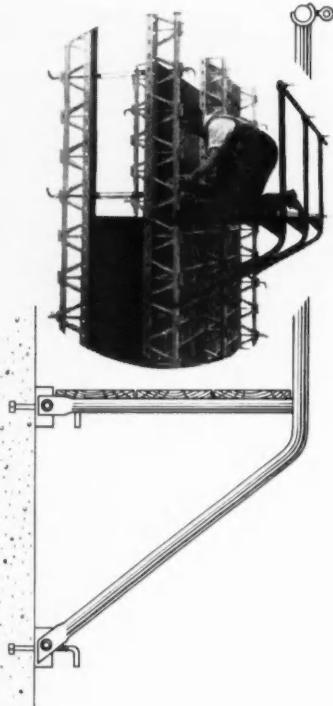
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## The Contractual Effect of Material Shortages

**C**ONTRACTORS will have hoped that material shortages were a thing of the past. But the recent, and apparently current brick shortage shows this problem is still with us. What is the effect of this type of shortage on the builder's contractual position?

The first need that a contractor in this position will feel is to be relieved of his obligation to complete on time and the threat of having to pay damages for any failure so to complete the job. The second need arises if the shortage is prolonged and he finds that his contract will have to last for perhaps several months beyond the date originally fixed for its completion; during those extra months upward movements in the cost of his labour and materials may have occurred and he may be faced with such extra costs over his estimates when tendering that the job may be quite unprofitable and even involve a loss. This problem is of course especially acute if the contract is without a rise-and-fall clause and such firm-price contracts are becoming more and more the rule in the industry. The second need is therefore to try and minimise these extra costs. How far do the usual forms of contract assist the contractor faced with material shortages in satisfying these two needs?

### Extension of Time

Under the R.I.B.A. Form the contractor will rely on the terms of Clause 18 and its subsidiary clause, 18(a); the contractor should pay especial care when tendering to ensure that this vital subsidiary clause, dealing with labour and material shortages, is not struck out since some building owners seem to feel that contractors are no longer entitled to its protection. Assuming the two clauses are left intact, how much protection do they give the contractor? What hurdles are to be overcome before an extension of time is given and the threat of having to pay damages for failure to complete on time is averted? These hurdles are three in number.

The first is that the contractor must, despite the shortage of materials that has occurred, "constantly use his best endeavours to prevent delay and do all that may reasonably be required to the satisfaction of the architect to proceed with the works." The contractor must therefore explore the market when a shortage of materials occurs; he cannot simply say that the source he was relying on has dried up; and simply because other sources are more expensive he cannot necessarily rely on that fact to absolve him from securing materials from these sources and getting on with the job. Of course he cannot be required to make purchases that are unreasonable but the mere fact that the new source is a little more expensive would not be an unreasonable demand. Of course, he should always try to get the architect to approve a new source if it is more expensive than the one he counted on using, and then purchase from this new source under an instruction from the architect which will need to be valued. If, however, the shortage is of a material whose type, quality and source have been specified by the architect then the contractor should merely report the shortage and ask for instructions; he would not be under the same obligation to search the market as in the case where the source of the material has been left to the contractor; in this case this first hurdle is easily passed. But in the more usual case where the source of the material is left to the contractor this hurdle is not passed unless the contractor has done all that he reasonably could be asked to do to find an alternative source; if he has not done this the architect could successfully rely on the obligation on the contractor quoted above and refuse to consider an extension of time.

The second hurdle is that the contractor must give notice in writing of the "event causing delay." This is most important but it is frequently not done or at least not confirmed, as it must be, in writing if the notice has been given orally. Even if later on there is no need to press for an extension it is always prudent for the contractor to put in this written notice of an "event causing delay" even if it means really interpreting that phrase as "event likely to cause delay." What, however, is the position if no such written notice has been given? The better opinion is that the mere absence of notice in writing would not, by itself, be sufficient grounds for the architect refusing to consider any extension of time; but this point has never been considered or decided by the courts and the failure to give written notice does allow the architect to raise this as a ground for refusing any extension. No one wants to have to fight this kind of argument and the surest, and simplest, way of avoiding any such argument is to have, as part of contract administration, the practice of submitting written notices when any of the events set out in Clauses 18 and 18(a) occur; if a senior member of the staff signs such notices that should ensure that frivolous notices are not submitted.

The third hurdle is that since the case of *Amalgamated Building Contractors v Waltham Holy Cross U.D.C.* [(1952) 2 All E.R. 452] it is clear that the architect has the right to defer his decision as to whether or not to grant an extension, and if so for what period, until after practical completion and even later. The contractor may not therefore know for how long a period, if any, he can expect an extension of time though he should press the architect for a decision; only if such decision is given before the original contractual completion date is reached can the contractor have a realistic completion date to work to.

The protection therefore provided by Clauses 18 and 18(a) is somewhat limited and negative in that all it does is to avert the threat of damages for failure to complete on time. Perhaps, therefore, particularly with a firm-price contract, the second need referred to above of the contractor faced with a shortage of materials, namely how to mitigate the extra expense to which the shortage may have put him by delaying the contract into a period when costs have risen, is the more important.

### Recovering the Cost

If the contract has a fluctuation clause then any increases in wages, national insurance, holiday contributions and increases in material prices should be recoverable; in view of the recent *Henry Boot, Ltd.* case care should be taken to ensure that any fluctuation clause allows full recovery of any holiday pay stamp increases. Under the R.I.B.A. fluctuation clause it is probably correct to say that fluctuations are payable in accordance with its provisions even though the contractor may be in breach of contract by reason of his having exceeded the contractual completion date or any extension thereof; many architects and surveyors try to argue otherwise but if a contractor is out of time the building owner's remedy is damages, either liquidated or left for the decision of the court, and not arbitrarily to assess those damages by refusing to implement the fluctuations clause. Even if fluctuations are recoverable they are usually net increases only without any addition for overheads and profit.

Under a firm-price contract the position is far less favourable for recovering any extra cost due to the contract extending for a longer period than was anticipated.

The basic rule here is that the contractor's obligation is to complete the works he has undertaken to complete; and this obligation continues even if circumstances make it onerous or unprofitable for him to do so. The only possible methods of escaping from a contract which has become onerous are by agreement with the other side which is not always possible; by relying on some clause to meet these circumstances which has been prudently inserted in the contract; or finally by invoking the doctrine of "frustration of contract," that is by saying that the contract has been brought to a premature end by a change of events not contemplated by the parties.

There is nothing to be said on the first escape which depends on the goodwill of the client. In regard to the second escape the R.I.B.A. contract provides in Clause 20 that the contractor may determine his employment under the contract if substantially the whole of the works are delayed for one month because of, *inter alia*, one of the events set out in Clause 18; whether by oversight or not there is most unfortunately no specific reference to Clause 18(a) and thus the R.I.B.A. contract provides no ground for the contractor to determine his employment under the contract because of shortage of materials substantially delaying the works for one month. In regard to the third possible escape the law relating to this difficult subject has been reviewed in a recent case *Société Franco v Sidemar S.P.A.* [(1960) 2 All E.R. 529] arising out of a contract alleged to have been frustrated because of the Suez crisis and the resultant need to divert ships via the Cape. Pearson J. considered and applied the most recent leading case on this subject in the House of Lords, *Davis Contractors, Ltd. v Fareham U.D.C.* under which the contractors attempted to say that the actual completion date had been so greatly increased owing to lack of skilled labour that the contract had been frustrated and that the work done would have to be valued and paid for not under the contract but on a quantum meruit, that is on a fair and reasonable basis. The most clear statement of when the courts will say that a contract has been frustrated occurs perhaps in Lord Radcliffe's speech in the *Davis Contractors* case; "frustration occurs whenever the law recognises that, without default of either party, a contractual obligation has become incapable of being performed because the circumstances in which performance is called for would render it a thing radically different from that which was undertaken by the contract . . . it is not hardship or inconvenience or material loss itself which calls the principle of frustration into play. There must as well be such a change in the significance of the obligation that the thing undertaken would, if performed, be a different thing from that contracted for." To apply this doctrine it does not mean that the events which occurred must necessarily have been unforeseen; in the *Société Franco* case the possibility of trouble in the Near East must always be in the minds of those engaged in shipping contracts yet Pearson J. felt that the Suez crisis was sufficient to frustrate the contract. Nevertheless, the alleged frustrating event must always be one to which the adjective "unexpected" could apply; thus in the *Davis Contractors* case the labour shortage could not at the date of the work, the late 1940's, be called "unexpected," and the House of Lords were unable to say that the shortages were such as to frustrate the contract. It is therefore unlikely that the kind of shortages in materials most commonly experienced would be sufficiently "unexpected" to enable the contractor to say they had frustrated the contract thus enabling him to bring an unremunerative job to an end.

## DUNGENESS NUCLEAR POWER STATION

### Work to Start Next Month

THE Central Electricity Generating Board propose to place a contract for the building of the Dungeness, Kent, nuclear power station with The Nuclear Power Group and work on the site will commence during August. The station is scheduled for completion in 1965.

Competitive tenders were invited in October, 1958, for the design, construction and commissioning of the station and these were submitted in March of this year. Dungeness is the sixth commercial nuclear power station to be constructed in Britain. The Minister of Power has given his consent for another station at Sizewell in Suffolk and his decision is awaited for a further site at Oldbury-on-Severn, Gloucestershire.

#### Dungeness Site

The Dungeness station will be built on the shingle headland which runs out to sea from the old town of Lydd. This promontory is triangular in shape, six miles across its base and projects nearly five miles into the sea from the line of marshland.

The shingle has been accumulating for the past 1,500 years and its formation is generally accepted as being due to the easterly drift in the Channel which piles up at Dungeness countless tons of flint and stone eroded from such places as Selsey Bill and Chesil Bank.

A new lighthouse has been built at Dungeness on land that probably did not exist a century ago.

The station working area will be 112

acres, and when complete the station will occupy 40 acres. The site chosen calls for no sacrifice of agricultural land, offers an unlimited supply of cooling water and is on level terrain. It is anticipated that the peak labour force employed during construction will be approximately 1,800. A large proportion of the labour will be drawn from local towns and villages.

#### Station Design

Basically, the design of the reactors follows that of earlier stations but incorporates the latest developments in reactor and heat transfer technology. They will be of the gas-cooled graphite-moderated type and use as fuel natural uranium bars clad in magnox sheaths.

The station is designed for a net electrical output of 550-MW and has two identical reactor units of approximately 840-MW thermal output each, a turbine house and the usual ancillaries.

Each reactor will have a prism-shaped graphite core, made up of large octagonal and small square bricks, enclosed in a spherical steel pressure vessel. The vessel is surrounded by a primary biological shield of concrete through which pass the gas ducts to four boilers. Dry carbon dioxide at a pressure of 283 p.s.i.a. is circulated between the reactor core and the boilers by four blowers driven by back pressure steam turbines. Each reactor unit has its own control system, fuel store, on-load fuelling equipment and fuel cooling pond.

The turbine house will contain four 142.5-MW turbo-alternators. The steam

and electrical connections between reactor units and turbine house will be taken underground through tunnels. The steam will be generated in the boilers at two pressures, 1,418 p.s.i.a. and 590 p.s.i.a. All the higher pressure steam will be passed through the back pressure turbines driving the blowers. These turbines exhaust at the L.P. pressure and after reheating in the boilers, this steam is passed with the L.P. steam to supply the main turbines. The overall station efficiency when working at these conditions will be 32.9 per cent.

The station will be connected to the national grid (275-kV for connection to supergrid) in the same way as any conventional station.

A Goliath crane of 400 tons lifting capacity will be used to transfer both light and heavy parts of the reactor plant from the construction or delivery areas into the reactor areas. Heavy parts to be lifted include boilers, pressure vessel segments, etc.

#### The Nuclear Power Group

The Nuclear Power Group was formed on January 1, 1960, and is a partnership between The Nuclear Power Plant Company, Ltd., and A.E.I.-John Thompson Nuclear Energy Co., Ltd. Although Dungeness will be the first contract obtained by T.N.P.G., the two partners—as separate concerns—were awarded the contracts for the first two commercial nuclear power stations in Great Britain and the first export order for a commercial nuclear power station.

The Group includes: Associated Electrical Industries, Ltd., Clarke, Chapman and Co., Ltd., Alex. Findlay and Co., Ltd., Head, Wrightson and Co., Ltd., Sir Robert McAlpine and Sons, Ltd., C. A. Parsons and Co., Ltd., A. Reyrolle and Co., Ltd., Strachan and Henshaw, Ltd., John Thompson, Ltd., and Whessoe, Ltd.



Artist's impression of the power station

(Concluded from page 308)

Contractors on this section are R. M. Douglas, Ltd., of Birmingham, and the agent authority Worcestershire County Council.

#### Contract No. 2

This contract covers just over six miles of motorway, running from the A.417 junction at Bury Court to the Herefordshire boundary. The roadworks involved construction of 25 culverts and a pedestrian underpass. The carriageway foundation is of limestone gravel on waterbound stone, with a hot-rolled asphalt running surface.

Some major difficulties were encountered on this sector, particularly near Bury Court, where earthmoving machines sank over their axles into a previously unknown silted fishpond. In the Glync Brook valley, even the culverts required 6ft. of solid filling below before they could be constructed at drainage level. At another point, there are sandstone cuttings where, although the rock was soft, it was ex-

tremely abrasive; and sparks and smoke from scraper blades gave some indication of the wear which occasioned their constant renewal and replacement. In the marl regions—two-thirds of the contract length—winter working proved impossible, since the marl, though resistant to water in situ, when worked broke down into a silt which flowed in wet conditions.

Contractors are R. M. Douglas, Ltd., with Gloucestershire County Council (county surveyor, R. A. Downs, B.Sc., A.M.I.C.E., M.I.Mun.E.) as agent authority. The 11 bridges in the contract were designed by the consulting engineers, W. S. Atkins and Partners, in just over 12 months.

In the Beaconsfield-Dymock Wood section, the motorway runs through the countryside in deep cuts and on embankments over culverted ravines, and then enters the Dymock State Forest, where 25,000 trees had to be removed by the Forestry Commission to make way for its progress.

#### Contract No. 1

Contract No. 1 covers the remainder of the project from the Herefordshire boundary to the end of the Ross By-pass, including Bridstow Bridge. The undulating nature of the country entailed "cut and fill" to such an extent that, over the whole length, the average difference in level between the new road and the former ground level is 20ft. Excavation amounted to nearly 1,000,000 cu. yd., half of it in rock. The highest embankment is 40ft. and the deepest cut 37ft. Maximum use has been made of the excavated rock to form stable embankments, but it is unfortunately too soft for carriageway construction.

The carriageway foundations are of crushed stone and cement-bound granular base, with hot-rolled asphalt running surface.

Contractors are Tarmac Civil Engineering, Ltd., with Herefordshire County Council (county surveyor, D. H. Banks, M.B.E., T.D., B.Sc., M.I.C.E.) as agent authority.

## PORISHEAD B POWER STATION, SOMERSET

### Welded Steel and Brickwork Construction

**I**N the recently commissioned Portishead B Power Station, Somerset, the turbine house, annexe bunker bay and boiler house are grouped into one extensive building measuring 704ft. long, 186ft. wide and 138ft. high, and faced with golden brown engineering bricks.

The building is steel-framed and the structural steel is of welded construction. Window frames are of aluminium set in artificial stonework dressings.

The turbine house brickwork is 18in. thick and the remainder 13½in. thick. Sand-lime and buff facing bricks are used inside the building to give the maximum light. The roofs are of precast concrete slabs, while floors generally are of in-situ concrete, overlaid with granolithic concrete, with the exception of the operating floor which is covered by quarry and adamantite tiles. In the boiler house, open steel flooring is in general use, for light and ventilating considerations.

Design and construction of the station was directed by Mr. A. C. Thirtle, formerly divisional controller, South Western Division, C.E.G.B. (now regional director, Southern, South Western and South Wales Region), assisted by Mr. J. Irlam, formerly chief generation engineer (construction) and now retired. The final stages of the work have been the responsibility of Mr. H. S. Davidson, divisional controller of the South Western Division, assisted by H. E. Vickers, chief generation engineer. Sir William Halcrow and Partners were the civil engineering consultants and the whole of the mechanical and electrical engineering work was handled by the Construction Department, South Western Division.

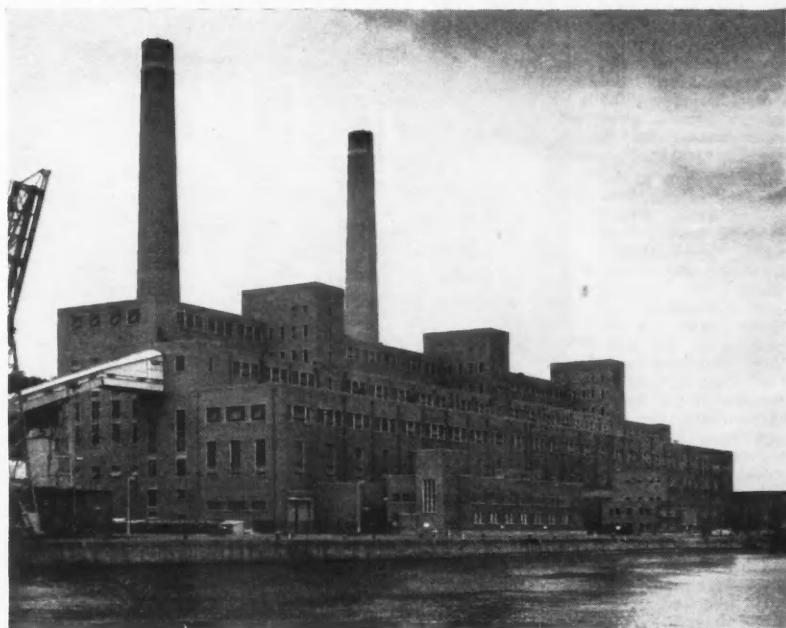
Around the main power station are the concrete-framed ancillary buildings. On the east side are the operations and the welfare blocks. The former houses the laboratory, offices, and the main control room. This is linked to the operating floor of the turbine house by a footbridge over a roadway and a section of the transformer pens. The welfare block provides canteen and washing facilities with a plenum heating system serving the clothing lockers.

On the west side of the station close to the boiler house wall are the electrostatic precipitators. A 20ft. wide road separates the precipitators and induced draught fans

from the main flue supporting structure under which are housed various ancillary departments such as ash pump house, oil store, machine shop, etc. To the north of the main buildings lies the screen house containing the screening equipment for the cooling water system. Other structures in connection with the coal handling equipment are sited on the south side of the

brick construction lined with acid resisting bricks. The chimneys have an internal diameter tapering from 26ft. 6in. to 20ft. and a wall thickness tapering from 5ft. 3in. to 13½in.

Foundations for both chimneys consist of a concrete slab 50ft. square and 6ft. thick, bearing on lower carboniferous strata at 23ft. above Ordnance datum.



Exterior view of the station

main buildings. All these have lightweight cladding in the form of asbestos sheeting fixed direct to the steel structure.

The twin chimneys are sited on the west side of the power station: they are 380ft. above ground level. The top level of these chimneys corresponds to the level of the chimneys of the A station, i.e., 410ft. Ordnance datum. The chimney stools are of reinforced concrete and the barrel is of

The extremely high tidal range that prevails in the Severn Estuary (the second highest in the world) affected the design of the circulating water system and made for considerable civil construction at Portishead. Four culverts are driven through rock out to a dredged channel in the estuary. These culverts connect to three 45ft. diameter pump pits 79ft. deep in the turbine house, each pit being associated with two turbo-alternator sets. The culverts, which are concrete lined, are each about a third of a mile in length. The invert levels are at -37.5ft. Ordnance datum in order to ensure that the circulating water pump suction are drowned at the lowest tide.

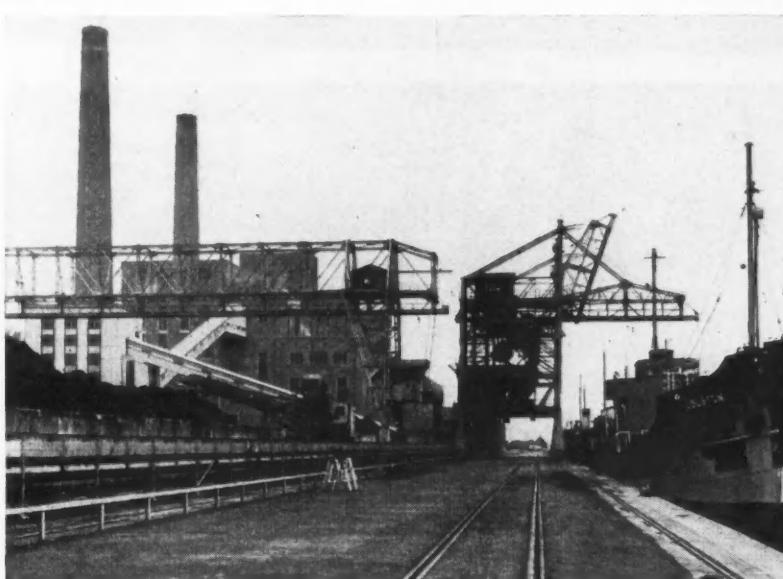
The tunnel portals at the dredged channel consist of precast reinforced concrete units. Each unit is cylindrical in shape 15ft. long and 9ft. internal diameter. The face of the unit, in contact with green-heart doors, is formed of granite blocks to ensure a high degree of watertightness necessary for dewatering the tunnel.

The weight of one portal unit with its doors is just over 50 tons. Since the unit was to be handled by a 10-ton derrick, the submerged dead weight of the unit was reduced to less than 10 tons by packing the unit with 750 cu. ft. of "Onozote."

The units were lowered into their locations and the line of the channel bed made good in concrete.

Circulating water conditions in the Severn estuary necessitate reversal of flow characteristics, and a manifold system of pipe-work in the bottom of each pit permits the selection of any culvert for inlet or discharge. The valves for this operation are remotely controlled hydraulically.

The power station requires some 18,000,000 gallons of cooling water per hour to be taken from the Severn estuary.



Coal unloading and storage cranes

The water passes through the culverts from the dredged channel to the screen house. Here each culvert is intersected by a 21ft. diameter 70ft. deep screen shaft which contains two 72in. wide vertical band screens fitted with variable speed drives. From here the screened water passes to the pump pits and via the manifold pipework to the four circulating water pumps which are located at the bottom of each pump pit and driven by four 460-h.p. motors at +30ft. level Ordnance datum through long vertical shafts and deliver the water through the condensers. The position of the condensers on the -11ft. Ordnance datum level floor is such that they give maximum advantage to the siphonic action of the return water to the culverts under low water conditions.

Two cableways under the lock at the entrance to the Portishead Dock, which involved further tunnelling, accommodate the 132,000-volt cables from the six turbo-alternators via 72,000-kVA transformers to the outdoor switching station which is sited to the east of the dock. These cable tunnels each have two vertical shafts 12ft. in diameter, 83ft. deep and the horizontal tunnels are each 8ft. in diameter and 345ft. long. Vertical shafts and the horizontal tunnels are lined with cast-iron segments bolted together and caulked, forming watertight joints.

Consequent on the decision to make a section of the station suitable for burning either coal or oil, further civil engineering works were necessary to accommodate, below ground level, two circular steel oil storage tanks of 9,200 tons and 13,200 tons capacity, together with an oil transfer pump house.

Other civil engineering work comprises the rectangular treated water tank which has a capacity of 500,000 gallons. This tank, the top of which is at 85ft. Ordnance datum and approximately level with the ground forms the foundation for the water treatment plant house which covers nearly half the tank. The other half is available for additional water treatment plant if required.

#### Coal Handling

Seaborne coal supplies are off-loaded at the Portishead Dock from colliers of 500-700-ton capacity, and rail-borne coal is off-loaded by wagon tipplers and fed to the conveyor system; also, lorried coal is delivered direct to the working coal store situated on the south side of the power station and having a storage capacity of 60,000 tons. The bunker associated with each boiler has a capacity of 450 tons, making the total bunkering for the eight coal fired boilers of 3,600 tons.

On the quay side are two Telpher type unloaders which grab from the boats and discharge the coal via a weigh-hopper recorder onto No. 1 belt, from which the coal can be delivered to either the station bunkers, the working coal store, or divided in any desired proportion to either.

A travelling Telpher type transporter of 260-tons per hour capacity spans the working coal store, and distributes the coal into stock, and also reclaims it as necessary back onto No. 1 conveyor.

The coaling system is designed for 400 tons per hour capacity, and incorporates

weighing equipment so that by direct weighing or by "differences," the distribution of the incoming coal can be recorded. At two points on the system, magnetic separators are installed to extract any ferrous tramp iron from the coal.

#### Boilers and Ash Handling

The boiler house is designed for a single row of 12 300,000lb. per hour boilers. The first eight boilers are pulverised fuel fired while the remaining Nos. 9-12

are at basement level, and twin air pre-heaters used together with mechanical grit arrestors and electrostatic precipitators. In the event of the loss of one of these items, as an emergency condition 60 per cent. of maximum continuous rating loading can be carried. Both the forced draught and induced draught fans are driven by induction regulator controlled variable-speed alternating current motors.

The clinker from the wet ash hopper below the boiler furnaces is removed by a high pressure sluicing system to swirl pits in the ash plant pump house which is located centrally at the rear of the station.

Dust from the hoppers of the economisers and dust extraction equipment is removed pneumatically by the use of high-pressure water ejectors discharging direct into the ash sluiceways.

Duplicate settling ponds are provided, one being emptied of drained ash by means of mobile equipment and lorries, while the adjacent pond is in commission. The ash removed from the settling pits is transported by lorry to distant ash disposal grounds, situated east of the dock.

#### Turbines

The six 65,000-kW turbo-alternators are arranged in pairs in "line-ahead" fashion, having steam end to steam end, with the circulating water pump pits between sets. Designed steam conditions are 900lb. per sq. in. and 900 degrees F. at the turbine stop valve, with 28.9in. vacuum and a final feed temperature of 385 degrees F.

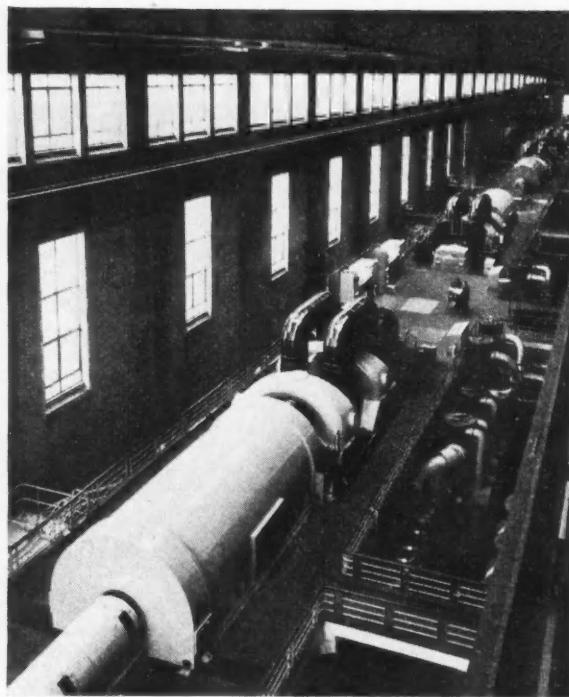
The turbines are two-cylinder units; the high and low pressure turbine rotors are rigidly coupled together, and the cylinders are provided with annular steam belts at the various extraction points to enable steam to be drawn from the complete periphery instead of from localised areas, to preserve thermal balance.

Each turbine exhausts to a single horizontal condenser. This has a cooling surface of 58,600 sq. ft., and is split vertically so that either half can be opened up for on-load cleaning.

Each turbine drives a 65,000-kW 11,800-V hydrogen cooled alternator. For alternators Nos. 1-4, the hydrogen pressure is 0.5lb. per sq. in. while for Nos. 5 and 6 it is as high as 15lb. per sq. in. The gas is cooled by circulating distilled water through four heat exchangers incorporated in the stator frame of each alternator.

#### Contractors

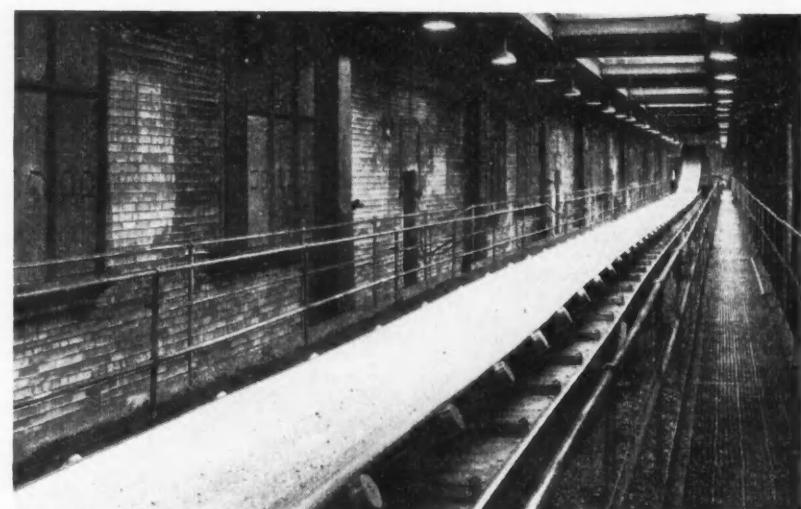
The main civil engineering contractors were: foundations, tunnels, etc.—Charles Brand and Son, Ltd.; structural steelwork—Sir William Arrol and Co., Ltd.; superstructure and ancillary works—John Laing and Son, Ltd.; and chimney barrels—Chimneys, Ltd.



The turbine room

boilers are installed for oil-firing but designed to facilitate conversion to pulverised fuel-firing if required. The steam conditions at the superheater outlet are 950lb. per sq. in. and 925 degrees F. with an economiser feed temperature of 385 degrees F. The boilers have radiant combustion chambers, and the walls are completely water-cooled by means of close pitched tubes. Each unit is supported from the main building structure and is so arranged that all the expansion takes place vertically downwards.

The draught plant comprises two forced draught and two induced draught fans situ-



Coal conveyor

## DEVELOPMENT OF LUTON MUNICIPAL AIRPORT

### Minister of Aviation Opens New Runway

A FURTHER stage in the development of Luton Municipal Airport was reached recently when Mr. Duncan Sandys, Minister of Aviation, officially opened the new concrete runway, taxiway and apron, and inaugurated customs facilities in a newly erected temporary customs building.

Luton Airport, the development of which is a good example of municipal enterprise, is sited on a plateau approximately 520ft. above sea level and overlooking Luton. It is two miles from the centre of the town and the M.1 Motorway. The new east-west runway is routed along a slight ridge line and this fact together with the ideal siting of the Airport affords excellent approaches and location facilities.

#### Runway Design and Construction

The runway is 5,532ft. long and 150ft. wide and has been designed to allow for extensions as required. It is contained within a strip 1,000ft. wide.

The requirements of international standards as laid down by the International Civil Aviation Organisation have been complied with 100 per cent. Further, the long-term policy of designing the physical

characteristics such as gradients, transverse slopes and sight lines to allow for a Code A airport was adopted.

The designed L.C.N. of the runway is 45 which is considered to be more than adequate to allow for present and anticipated future use of the Airport. For non-repetitious usage, however, a considerably higher L.C.N. value can be allowed. The basis of the structural design of the runway indicates that the estimated L.C.N. value of 45 in indeed very modest for the following reasons: (i) the design is based on Dr. Westergaard's subgrade modulus and results in higher computed stresses than actual stresses because of the assumption that the subgrade behaves like a dense liquid and not a deep elastic solid; (ii) the further increase in strength as the concrete matures may rise the factor of safety to the order of 1.5; and (iii) the site and quality of the concrete manufacturer gave a concrete which consistently appreciably exceeded the specified minimum strength.

The cross-section of the runway has been laid to a straight 1 in 100 crossfall instead of the more conventional camber and has given far better surface water drainage, ponding being virtually eliminated.

The modern construction techniques

used have enabled a rideability factor to be obtained hitherto not normally attained on runway construction.

Details of these construction techniques appeared in *The Contract Journal* of October 29 last, in extracts from a Paper presented by Mr. R. T. Davies, principal engineering assistant, Borough of Luton, at a meeting of the South Midland District of the Institution of Municipal Engineers. The main contractor for the runway was G. Percy Trentham, Ltd.

#### Airfield Lighting

Almost the whole of the fitting and control equipment is being supplied by the General Electric Company and is being installed at the present time by the main contractor, C. Maurice (Contractors), Ltd., Bishop's Stortford.

The light fittings for the runway and threshold lighting are the ZA 105 type which is a high intensity bi-directional fitting with an omni-directional low intensity component. The five stage brilliancy control and the omni-directional low intensity component will enable the maximum help to be given to pilots of planes in circuit during bad weather.

Both high intensity and low intensity approach lighting is being provided for a distance of 1,400ft. from the thresholds at both ends of the runway. A crossbar, consisting of 11 pairs of fittings at 9ft. centres, and sited at 1,000ft. from the threshold is also being provided at both approaches. Both high and low intensity systems will have brilliancy control.

Luton Municipal Airport will except for London Airport be the first airport to be equipped with a complete "Visual Glide Path Indicator" installation as designed by the Royal Aircraft Establishment and developed by the National Research Development Corporation.

Centre-line taxiway lighting, illuminated wind-sock identification beacons and apron floodlighting is also being installed in the present scheme.

The whole of the switchgear and control equipment is being housed in a new sub/relay/station and will be remotely controlled from a console desk in the control tower. The desk includes an illuminated mimic diagram of the airport.

#### Future Development

Plans are in hand for a new large hangar and passenger terminal building as the next step in the development of the Airport.

Mr. F. Oliver, A.M.I.C.E., A.M.I.Struct.E., M.I.Mun.E., is borough engineer and surveyor of Luton.



Aerial view of new runway

## NEW CAR-PARKING SYSTEM ON RAMP PRINCIPLE

A NEW system of car parking in a multi-storey structure, designed on the ramp principle, is now offered by Wilson Lovatt and Sons, Ltd.

Known as the Streamline parking garage, the system has been invented by Mr. T. Elvet Llewellyn, of T. Elvet Llewellyn and Lawford Gower, architects, Cardiff. British Reinforced Concrete Engineering Co., Ltd., are the structural designers.

The system comprises a reinforced concrete structure with inclined floors forming a continuous roadway, 50ft. wide. It accommodates cars in diametrically opposed bays, leaving a central carriageway 20ft. wide.

The floors are arranged in two spirals, interleaved one with the other, one floor

for ascent and one for descent. All traffic is one-way on one continuous carriageway from entrance to exit, and there is no crossing of traffic. The driver cannot be confused as there is only one road along which he is directed by arrows on a thick red or blue line from a single control point, until he finds a vacant space. He then parks and leaves by stairs or lift.

Control of the whole park calls for only one attendant. Stationed at the entrance, he has full control of every car entering or leaving. The operation is similar to that of a toll gate.

With a gradient of 1 in 28, and a depth between floors of about 8ft., the Streamline garage would be 248ft. long and 104ft. wide. With four circuits above street

level, giving a distance of 700yd., and two below giving 350yd., the garage would accommodate 684 vehicles. Each additional floor provides an extra 112 places, and by increasing the gradients to 1 in 20 the building length can be reduced to 152ft.

A normal garage for a minimum of 600 cars can be built for under £200 per car space, exclusive of land and planning.

## CONTRACTORS PURCHASE HOTEL

Tarmac Civil Engineering, Ltd., have purchased the Sandiway Hotel at Weston-under-Penyard to accommodate their executive staff in charge of a newly awarded contract for the seven-mile-long Herefordshire section of the Ross-Tewkesbury Motorway.

## M.O.W. TO REVISE APPROVED LIST PROCEDURE

SOME 96,000 construction firms are to be invited by the Ministry of Works to apply to be placed on the Ministry's approved list of contractors. A note to this effect will be sent next September with the annual return which the Department collects from every firm on details of employment. It will, however, be made clear that the Ministry is not anxious to encourage the very small firms (those not employing more than five men) to apply, as the number of jobs they could cover is very limited. Neither will the invitation be extended to specialist subcontractors at this stage.

This action follows an investigation by Mr. Harmar Nicholls, Parliamentary Secretary, who came to the conclusion that the existing lists were out of date and that many of the medium firms were unaware of the procedure to be taken to be included on the list.

### Provisional List First

Firms not on the list will be invited to write for an application form, which will have to be completed and supported by a certificate signed by a qualified architect, surveyor or engineer to the effect that the applicants are of good standing and capable of carrying out jobs of the size stated. Such applications which are judged satisfactory will be placed initially on a provisional list and considered with firms on the approved list when the Ministry draws up lists of firms to be invited to tender. Before being invited the references of such a firm will be taken up and its premises and capabilities inspected. If it then comes up to approved list standards it will be transferred to that list.

The Ministry point out that on January 1, 1960, the Ministry had in force only 871 new works contracts and 618 maintenance contracts, so that every firm on the list cannot expect frequent invitations.

To ensure that the present approved list is entirely up to date, the Ministry will invite those firms on it who have not been in recent touch with the Department to report any changes in their organisation and capabilities. The Ministry particularly wants to hear of firms which can now carry out larger jobs than when they were first entered on the list.

## ADOPTION OF I.C.E. CONDITIONS

### "Now Virtually Complete"

Of the 1,757 local authorities in England, Scotland and Wales, no less than 1,311 now use the I.C.E. Conditions of Contract for letting their civil engineering contracts. This is disclosed by a survey undertaken by the Federation of Civil Engineering Contractors.

In a statement, the Federation points out that most of the local authorities not using the I.C.E. Conditions of Contract probably carry out little, if any, civil engineering work, and the Federation is of the view that the adoption of the I.C.E. Conditions by local authorities is now virtually complete.

## FOR THE DIARY

### July 26

Meeting of the Mid-Southern branch of the Contractors Mechanical Plant Engineers, The George Hotel, Caversham Bridge, Reading, 7.30 p.m. Film "The Motorway" will be shown.

### Aug. 30-Sept. 3

Royal Institution of Chartered Surveyors. Annual conference at the University College of North Wales, Bangor.

### Sept. 8

Meeting of the Southern Counties branch

## MINISTER OPENS MINWORTH SLUDGE DIGESTION PLANT

A NEW primary sludge digestion plant which has been constructed at Minworth, near Birmingham, for The Birmingham, Tame and Rea District Drainage Board, was inaugurated recently by the Minister of Housing and Local Government.

The plant, which has cost more than £850,000, comprises 16 digestion tanks with four control chambers each placed centrally in a group of four digestion tanks, interconnecting subways, a main pumping house and a small subsidiary high-pressure pumping house, together with ancillary mechanical and electrical equipment. Pending the construction of the sedimentation plant at Minworth, only 12 of the digestion tanks are fitted with gas collectors, the remaining four tanks being used for the reception and dewatering of the crude sludge from Saltey, Ashold and Tyburn Works. The gas collected will be used during the interim in 12 gas-fired sludge heaters. A surplus gas burner is provided. Ultimately all the tanks will be equipped for the collection of gas, which it is anticipated will be used as fuel in engine driven electricity generating sets housed in a station adjacent to the digestion plant. When the generating station is in operation, sludge heating will be effected by the use of waste heat from the engines. In order to conserve heat, the digestion tanks have been banked around and the site finished at tank coping level.

An interesting feature of the plant is that the 30ft. deep side walls of the 16 82ft. diameter digestion tanks are built in prestressed concrete by the Preload system, the thickness before application of the Gunite protective covering being 9in. Details of their construction were reported in *The Contract Journal*, August 29, 1957.

The engineer to the Board is R. V. Daviss, B.Sc., M.I.C.E.

## CROSS-CHANNEL CABLE CONTRACT

A contract worth about £600,000 has been placed by the Central Electricity Generating Board with Associated Electrical Industries, Ltd., and British Insulated Callender's Cables, Ltd., for cables to be used for the Cross-Channel power link between England and France.

The contract covers the English shore section and one half of the Channel connection. The remainder will be made by French cable-making companies working on behalf of Electricité de France.

Two similar 15-mile lengths of single-core submarine cable, insulated for 100,000-Volts and operating at potentials of +100,000-Volts and -100,000-Volts to earth will be used for the "go and return" circuits. The link will operate with direct current.

As the cables must be laid close enough to one another to conform with the Minister of Transport's requirement that at all times the magnetic compass deflection caused by the cables does not exceed two degrees at the sea surface, special techniques have been devised for laying both cables simultaneously.

of the Contractors Mechanical Plant Engineers, The Surrey Tavern, Morden Road, Morden, 7.30 p.m. Film show.

### Sept. 9

Building Surveyors' Institute Dinner Dance, Waldorf Hotel, London.

### Sept. 13

Eighth annual residential study course arranged by the South-Western District of the Institution of Municipal Engineers. Dillington House, Ilminster, Somerset. Sept. 13-15.

## Late Construction News

**WANDSWORTH FLATS.**—Wandsworth B.C. have been recommended to accept the following tenders: Eight maisonettes and 110 flats in one two-storey, two five-storey and two 11-storey blocks as phase III of the William Willison Estate, Putney—Pauling and Co., Ltd., 26 Victoria Street, London, S.W.1, £340,451; 49 flats in two seven-storey blocks as phase VII of Roupell Park Estate, Streatham—Pauling and Co., Ltd., £153,643; 21 flats for elderly people at Southcroft Road site, Tooting—Greenaway and Son, Ltd., 265 Lordship Lane, London, S.E.22, £50,700; 20 flats in two and three-storey blocks at Clapham Manor Street site—W. R. Oldham, Ltd., Southend Lane, London, S.E.26, £43,996.

**SUSSEX DRAINAGE SCHEME.**—William Old, Ltd., Harrow, Middx., have been awarded a contract worth £177,222 by Chichester (Sussex) R.D.C., for the main drainage of Storrington. Work which includes 12,000yd. of sewers and rising mains and modifications to the existing sewage works, will start in September. The consulting engineers are Howard Humphreys and Sons, 191 Victoria Street, London, S.W.1.

**SOUTHWARK DEVELOPMENT.**—Work is about to start on the first stage of development of the Draper Street site in the L.C.C.'s Elephant and Castle comprehensive development area. Walter Lawrence and Son, Ltd., 31 Sun Street, London, E.C.2, are to build a multi-storey block of shops and offices at a cost of £191,472.

**MULTI-STORY GARAGE.**—The main contractor for building a multi-storey parking place and petrol filling station at Audley Square and Waverton Street, has been placed with Bernard Sunley and Sons, Ltd., 25 Berkeley Square, London, S.W.1, by Westminster City Council. Completion will take 60 weeks. The architect is Frank Risdon, 47 Bedford Row, London, W.C.1.

**KARIBA 2ND STAGE.**—The Federal Power Board of Rhodesia have awarded a contract to the Cementation Co. (Rhodesia), Ltd., to do exploratory work for the second stage of the Kariba project. The second stage comprises the installation of an underground power station on the north bank of the Zambezi. When the exploratory work is complete a final decision on the design and siting of the station will be possible.

**BRUNEI WATER SCHEME.**—The tender of The China Construction Co. (Brunei), Ltd., at \$1,300,000, has been accepted by the Government of Brunei for contract 8 of the Brunei Town water supply scheme. The work will include five miles of trunk mains, three reinforced concrete reservoirs, construction of a treatment works and two miles of access roadway. A start will be made in September. Binnie, Deacon and Gourley, London, S.W.1, are the consulting engineers.

**LIVERPOOL COLLEGE.**—Liverpool City Education Committee have accepted the tender of Tysons, Ltd., Liverpool, amounting to £1,112,469, for the erection of the second stage of the new College of Technology. The tender is £250,000 more than the Ministry is prepared to allow, and the Council are to approach the contractors to see if reductions can be made, and are to ask the Ministry to raise their limit.

**RIVER DIVERSION.**—Derek Crouch, Ltd., Birtley, Durham, have been given a contract by the British Transport Commission for the diversion of the River Tees in connection with the construction of a new marshalling yard at Lamesley.

## MOTORWAY OPENING DELAY

According to Ald. E. Guy Bigwood, chairman of Worcestershire County Council's highways committee, the new Ross Spur Motorway is not now likely to be ready before the end of the year.

He said that hard shoulders on the motorway had collapsed under heavy lorries during recent tests.

## HARLOW STATION BUILT ON MARSH LAND

### Buildings Have Under-floor Heating

A GLASS-WALLED booking hall and concourse, 50ft. wide and 40ft. deep, waiting rooms and overbridge warmed by under-floor heating, and parking space for 400 cars are some of the features of the new Harlow Town station, declared open recently by the general manager of the Eastern Region, Mr. H. C. Johnson, O.B.E.

The station, built to serve the increasing population of the new town, presents an air of spaciousness and comfort and is a complete break from the traditional conception of railway architecture. Work on it began in 1959, with the gradual demolition of the old Burnt Mill station, which it replaces.

The new buildings are approached by a short access road leading directly off the town's ring road. Passengers enter through the glass-walled concourse, which is 17ft. high and around which are the fully mechanised ticket office, public telephones, bookstall, tobacco kiosk and station master's office. The inquiry and parcels office and large parcels yard are on the east side, while on the west is storage for 150 bicycles under cover. The station is equipped with automatic train departure indicators and a public address system.

The concourse gives access to two island platforms by stairways to and from the overbridge, on which are situated the public and staff amenities. In addition to the waiting room on the bridge, there are five glass-walled passenger shelters on the platforms.

The station buildings are heated throughout by hot-water pipes embedded in the floor surfaces. Modern lighting has been installed to enhance the station's appearance both by day and night.

The entire parcels traffic is conveyed between platforms by three lifts, the three 50ft. lift towers being the dominant external feature of the buildings.

#### Structure

As the four-acre site of the station is in low-lying marshy ground, the land had to be completely drained before work could begin in earnest. Pumps worked round the clock for nearly a month pumping away thousands of gallons of water.

Nearly 300 piles had to be driven to

carry the new station—some to a depth of 25ft. More than 150 were needed to carry the platforms and a further 130 were used for the main building. Three thousand wagons of spoil were used to fill the site to avoid the risk of flooding.

The overbridge deck is constructed of prestressed concrete units which rest on reinforced concrete bearings, cantilevered

specially designed for speedy erection. The lift towers are all of reinforced concrete construction. Roofs are covered with three-layer felt on timber boarding, and as a special fire precaution the whole of the structural timber has been impregnated to prevent flame spread.

Facing bricks are Ryarsh "Heather" flint lime with dark pointing in the hori-



The station at night

from the lift shafts. This allowed the bridge to be built with the minimum interference to trains.

The concourse roof is supported by a concealed framework of prestressed concrete beams cantilevered from four pre-stressed columns. Staircases are of reinforced concrete on load-bearing brickwork. The parcels office, cycle store, overbridge roof and platform canopies and shelters are steel-framed with timber beams which were

zontal joints, and the roofs have dark green painted plywood facias. The window frames are of steel.

Interior finishes have been chosen for hard wear and minimum maintenance. The public areas have blue quarry tile floors, pale blue glass mosaic walls and varnished timber ceilings.

#### Track Layout

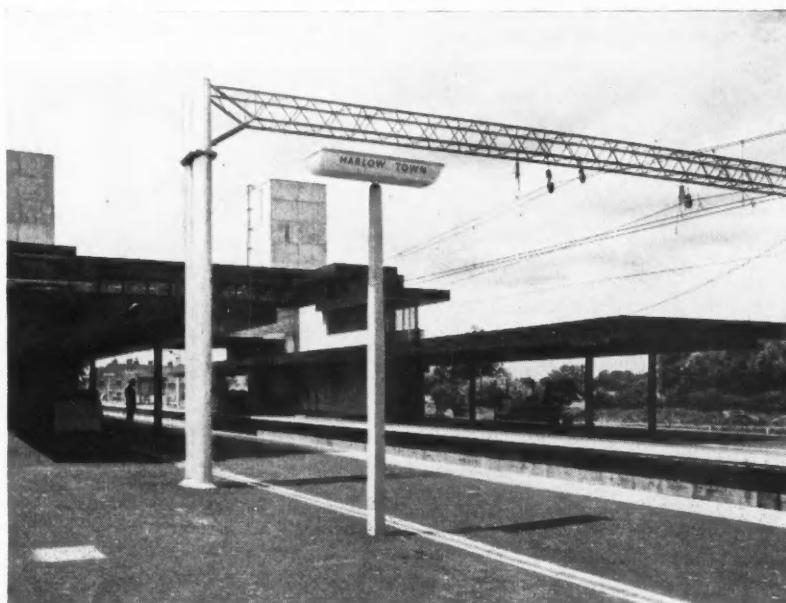
Simultaneously with the construction of the station has gone the installation of a new track layout. There are now four lines through the station, instead of two; an Up and Down main line and loops in each direction. The latter can be extended to form carriage sidings if required. Also on the Up side is a siding for dealing with parcels, newspapers and similar traffic.

The new track layout has meant extensive signalling alterations. Semaphore signalling is replaced by "searchlight" type colour-light signals, controlled by a new signalbox at Harlow Mill, which houses the route-setting control panel for the whole area.

#### Consultants and Contractors

The architect for the station was Mr. H. H. Powell, B.Arch., F.R.I.B.A., architect, Eastern Region, and the quantity surveyors were Yeoman and Edwards. The whole of the work was carried out under the general direction of Mr. A. K. Terris, B.Sc., M.I.C.E., chief civil engineer, Eastern Region, while signalling work was directed by Mr. R. A. Green, A.M.I.E.E., signal engineer, Eastern Region.

W. and C. French, Ltd., were the main contractors.



View from the "up" platform

The Minister of Housing and Local Government has rejected an appeal by Berry Head Lime and Stone Co., Ltd., to extend their limestone working on Berry Head, Devon.

***In Parliament***

## WILL ECONOMIC MEASURES CUT CONSTRUCTION WORK?

THE Chancellor of the Exchequer, Mr. Derick Heathcoat Amory, stated in the Commons last week that he did not expect his recent economic restraints to have more than a marginal effect on industrial investment in fixed capital. The effect was more likely to be on consumer expenditure, and on stock-holding, than on fixed investment whether in the public or private industrial sectors.

The net effect of the revised figures on the Exchequer and central Government borrowing would be very small indeed. The rate of increase in public investment expenditure was now, in fact, levelling off, and no very drastic cutting back would be required to hold the total for next year in accordance with the announcement which he had already made.

He had been invited to give the figures for the different items making up the programme. This he could not do, but when the programme had been officially completed and agreed it was intended to lay it before Parliament.

While the Chancellor was unable to mention specific items, Mr. Harold Wilson, from the Opposition Front Bench, said he thought there would be big cuts in the planned expenditure on roads and education.

On roads he said we had seen in the past two or three years the complete lunacy of the Government's failure to plan. More cars, more factories for still more cars, inadequate roads, vast office buildings in the centres of big towns and cities, increasing urban congestion, and inadequate provision for people to travel to their work.

It was a mistake to cut down on the road programme. At present we had substantial numbers of skilled teams, expert technicians, design teams, advisers and all the rest, and we had very valuable and expensive plant, which was at present lying

idle. It would cost relatively little to set all this plant and teams of experts to work. In the modern world, the building of roads was not nearly as expensive as it used to be, and, in terms of the classic problem of inflation, more investment in the roads would be a real investment for the nation.

### Willesden General Hospital

Mr. Pavitt asked the Minister of Health what progress had been made with the proposed new casualty outpatients, X-ray and pharmacy building for the Willesden General Hospital.

Replying, the Parliament Secretary, Miss E. Pitt, said that the North West Metropolitan Regional Hospital Board had been given approval of this project early in March, this year, and was now preparing working drawings and bills of quantities with a view to inviting tenders. She had no reason to expect delay in the scheme, which both the Board and the Minister desired to see completed as early as possible.

### M.1 and M.45 (Accidents)

Mr. Janner asked the Minister of Transport if he would give, expressed in vehicle miles, the fatality and personal injury rate, respectively, for M.1 and M.45 for the period to the end of May.

Mr. Marples, in a written answer, stated that between November, 1959, and May 31, 1960, the fatality rate per million vehicle miles travelled on the motorway was 0.06. For all casualties the rate was 1.23 per million vehicle miles.

### Scottish Housing

At the end of May one of the large burghs, viz., Port Glasgow, and eight of the 33 counties, viz., Berwick, Kincardine, Kinross, Orkney, Peebles, Roxburgh, Selkirk and Wigtown, had no local authority houses under construction, replied the Secretary of State for Scotland, Mr. John

Macay, when questioned by Mr. W. Hamilton and Mr. Ross.

He understood that six of these authorities considered that their urgent needs were met or largely met, but some of them contemplated providing further houses from time to time as required. The other three authorities, Port Glasgow and Kincardine and Wigton Counties, had expressed concern about subsidies and interest rates, but were now considering proposals for further building.

### Land (Purchases and Prices)

The Minister of Housing and Local Government, Mr. Henry Brooke, in a written answer informed Mr. Boyden that the total amounts spent by local authorities on the acquisition of land and buildings in the financial years ended March 31, 1951, 1955 and 1959 were, respectively, £27,694,000, £32,174,000 and £38,588,000. The corresponding figure for 1959-60 was provisionally estimated at £52,082,000.

Mr. Brooke rejected a suggestion that he should obtain information from selected local authorities in the Home Counties, the Midlands, and the North, as to the price per acre they had paid for comparable council house sites in 1947, 1951, 1955 and 1959.

He said that no two sites were precisely comparable and that an inquiry into the past would not produce any worthwhile results for the future.

### Brick Supplies

When Mr. J. P. W. Mallalieu asked what steps were being taken to relieve the acute shortage of bricks, the Minister of Works, Lord John Hope, stated that brickmakers were increasing productions and trying to see that bricks went to sites where they were needed. 2,782,000,000 bricks had been delivered in the first five months of the year. He had, in addition, encouraged increased production and use of other materials.

Braithwaite and Co. Structural, Ltd., are responsible for the complete fabrication, supply and erection of the steel bridgework that will span the Don Valley on the Doncaster Motorway. The weight of steel involved is approximately 2,213 tons.

(Concluded from page 306)

When the two half arches are erected to the centre there will be a small gap of some 12in. to 14in. between the two halves. This will be closed by lowering out on the anchorage cables and jacking up at the tail-end of each side span, which has been erected lower than its final level for this purpose. When the closure is complete predetermined loads will be jacked into the upper and lower chords and all temporary anchorage material will be removed.

Suspenders, cross girders and the deck lateral bracing system will be erected by the creeper cranes as they are moved backwards down the arch to their original positions where they will be dismantled.

The erection of the remainder of the deck steel will be carried out by mobile cranes working forwards from both sides, travelling on the steel already erected.

The concrete deck will be placed from both sides on the completed steelwork.

### R.C. Approach Viaducts

Construction of the reinforced concrete approach viaducts is being carried out by Leonard Fairclough, Ltd., as sub-contractors to Dorman Long.

The design consists of four beams supporting the deck slab—the beams being continuous over three spans. Due to the very confined site the beams were precast in sections on the ground directly alongside their final positions. Two lengths of beam were produced: 47ft., to be positioned over the fixed piers, and 23ft. over the free piers. These sections were lifted into position by Lorain Motorcrane and supported by mili-

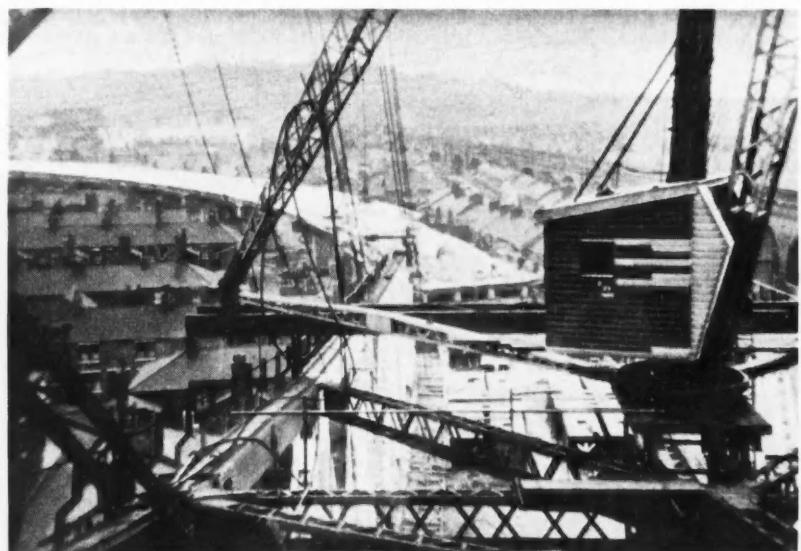
tary trestling. The precast beams were joined together by sections cast in situ.

As the beams are completed the 8in. road slab is cast between them and the cantilever footpath is constructed in situ on each side. Finally, the asphalt surface will be laid.

The consultants' resident engineer on

the site is Mr. A. A. Cairncross, the main contractors' agent is Mr. W. J. Harper and the (civil) sub-contractors' agent is Mr. J. J. Polding.

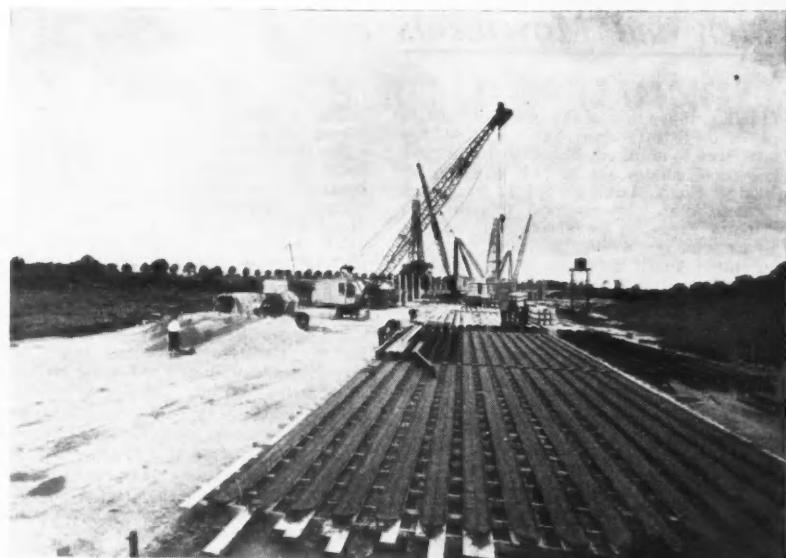
Other sub-contractors include: Northern Erection Co. (Rotherham), Ltd.—riveting; J. R. Hipkin, Ltd.—welding; Thomas Cotton, Ltd.—painting.



Runcorn approach viaduct seen from the bridge

## BIGGLESWADE BY-PASS

### Three Bridges Under Construction



Work in progress on construction of bridge over River Ivel

**WORK** is well ahead on the Biggleswade By-pass, a scheme forming part of the modernisation programme of the Great North Road.

This all-purpose dual carriageway road crosses the Kings Cross to Edinburgh main line railway, the A.6001, and the River Ivel and its flood plain.

#### Railway Bridge

The railway bridge has four spans, one 59ft. crossing the four tracks of main line, one 42ft. crossing two sidings, and an accommodation track and two side spans of 32ft. and 35ft.

The deck is composite, 33in. by 7in. castellated joists in concrete, placed over the main spans. The lower flanges of the joists are encased in supersulphated cement concrete for smoke protection and slabs of the same concrete span between them to form in-situ shoring. Seventeen inch diameter "Sonovoids" are incorporated in the deck. Expansion is taken up at the west abutments with a steel flap in the carriageway. The spans are simply supported for dead load, continuous for live load, and rest on rubber pads, except at the west abutment, which has rubber bearings.

The piers are open trestles and flex with the deck as it expands. The abutments are also trestles incorporating "A" frames to accommodate the high expansion reactions and braking loads.

The bridge is founded on 16in. dia. 40ft. long "Holmpress" piles, except the footings adjacent to the railway tracks, which are on 45ft. bored piles.

#### Road Bridge

The road bridge flies over the A.6001 in one 41ft. span. The side spans, reaching to the abutments buried in the embankment, are 26ft. and 32ft.

The deck is a 27in. R.C. slab, incorporating 14in. dia. "Sonovoids" to reduce dead weight. It twists to follow the superelevation build-up of the carriageway, and the parapets follow the transition curve. The spans are simply supported on rubber pads, and expansion is taken up separately for each one.

A "contemporary" outline has been used for the piers, and the abutments are R.C. trestles.

The abutments are founded on 16in. dia. "Holmpress" re-drive cast in-situ piles, 38ft. long, and the piers on 55ft., 16in. dia. bored piles (a high pressure gas main lies under the A.6001, and vibration could not be permitted).



A pile driver at work on the River Ivel bridge site

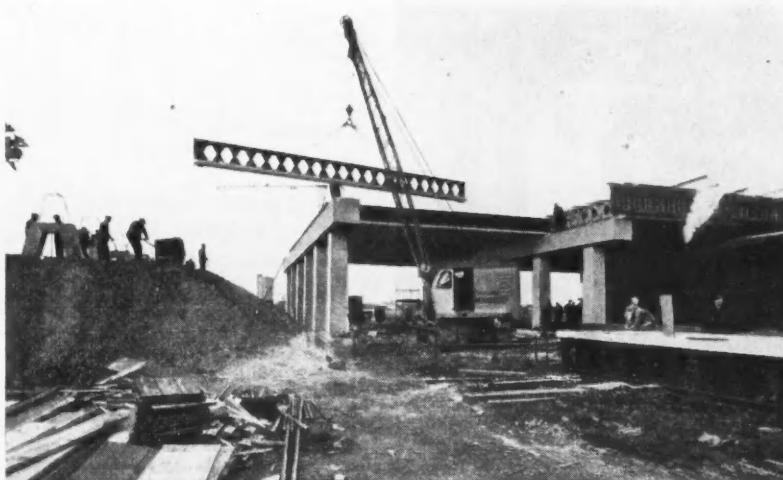
The bridge over the River Ivel has three continuous spans, 34ft., 50ft. and 34ft., and a skew of 40 deg. The two piers stand in the river, and the abutments behind the towpaths.

The deck is R.C. tee-beams with curved soffits, the curves being a shallow arch in the centre span and "flyaways" on the outside. It is seated on large rubber bearings, and expansion is taken up at the east end, using a steel flap in the carriageway. The parapets are straight and the road curve is accommodated by extra width.

The piers are solid R.C., and the abutments earth retaining R.C. cantilevers.

The bridge is founded on 55ft. long 14in. dia. R.C. piles.

The whole scheme has been designed and is being supervised by the Bedfordshire County Council acting as agents for the Ministry of Transport. Construction started in September last at a contract figure of approximately £925,000. The main contractors are Sydney Green and Sons (Contractors), Ltd., who have subcontracted the bridge works to Yorkshire Hennebique, Ltd.



Laying a span on the railway bridge site

## Men and Movements

THE composition of the board of Costain and Press (Overseas Services), Ltd., has now been announced. The company, whose registered offices are at 111 Westminster Bridge Road, London, S.E.1, has been formed jointly by Richard Costain and William Press, to undertake contracts in all parts of the world, particularly for the oil and chemical industries, and both companies have equal representation on the board of the new company. The board



J. F. ROBINSON

D. HOLMES

consists of Sir Richard Costain, C.B.E., (chairman), Col. P. McA. Sinclair, M.C., Mr. J. B. Barrett, A.A.C.C.A., and Mr. J. F. Robinson, B.Sc.(Lond.) (joint managing director) from Richard Costain; and Mr. K. P. Allpress\*, M.A., (deputy chairman), Mr. W. H. G. Roach\*, M.B.E., F.C.G.I., M.I.C.E., M.Inst.Gas E., Mr. E. Hatton Miller\*, F.A.C.C.A., and Mr. Donald Holmes\*, A.M.I.Mech.E., M.Inst.Pet., (joint managing director) with Mr. R. Y. Stevens (alternative to \*) from William Press.

Thomas Smith and Sons (Rodley), Ltd., have announced the appointments of Mr. P. Goodall as export sales manager, and Mr. L. R. S. French as home sales manager. Mr. Goodall joined the firm six years ago as assistant to the sales director. Mr. French, who has been with the company for 17 years, has for the past 13 years acted as the firm's technical representative in the north of England.

The Goodyear Tyre and Rubber Co. (Great Britain), Ltd., have announced two executive changes in their industrial products sales organisation. Mr. W. U. Chapman, who has for the past 16 years been manager of Goodyear industrial products department, has been transferred to the export sales division of the company. Mr. J. T. Pearson succeeds Mr. Chapman as manager, Goodyear industrial products department. He joined Goodyear in 1953, and during his career with the company has been responsible, as a sales engineer, for the Goodyear industrial brake programme and for special industrial technical assignments within the manufacturers' sales division.

Mr. Peter Trench, director of the National Federation of Building Trades Employers, will visit the United States in September to study industrial organisation in building and contracting.

Mr. G. R. Shotton, managing director of Shotton Bros., Ltd., a member of the Birfield group of companies, has been elected president of the Institute of British Foundrymen for the year 1960/61. He was president of the Birmingham branch of the Institute in 1944, and has served on the Institute's technical council for almost 30 years, and on the general council for the past 17 years. He has also been a member of the council and research board of the British Cast Iron Research Association for approximately 12 years and a member of the Association's advisory committee for the past six years.

Head Wrightson and Co., Ltd., have appointed Mr. W. H. Adams general manager of their subsidiary company, Head Wrightson Iron and Steel Works Engineering, Ltd.

Mr. Keith Higgins has been appointed publicity officer of Coventry Climax Engines, Ltd., and Mr. Peter M. Jarvis has been appointed public relations assistant.



The picture shows members of a delegation from the British welding industry who recently visited Soviet Russia at the invitation of the State Scientific and Technical Committee of the U.S.S.R. Council of Ministers under arrangements by the British Electrical and Allied Manufacturers' Association. From left to right, they are: Mr. R. H. Boughton (English Electric Co., Ltd.); Mr. W. S. Simmie (Pressed Steel Co., Ltd.); Mr. G. H. Moule (A.E.I. (Manchester), Ltd.); Mr. T. F. Tribe (British Federal Welder and Machine Co., Ltd.); Mr. G. M. Harvey (British Oxygen Gases, Ltd.).

An American architect, Professor George Edson Danforth, will visit this country in September as the start of an intensive European lecture tour during which he plans to give 13 lectures at architectural forums in France, Germany, Belgium and Italy. In London, he will be the main speaker at an international forum at the R.I.B.A., sponsored by the United Kingdom Stainless Steel Manufacturers' Association, when he will lecture on the progress being made in the United States with the use of stainless steel in curtain wall construction.

Mr. R. J. Clutterbuck has been appointed London sales manager for Blackwood Hodge.



R. J. CLUTTERBUCK

Mr. E. C. Shackleton, Assoc.I.Mech.E., Assoc.I.E.E., has been appointed assistant chief project engineer to the Midlands Project Group of the Central Electricity Generating Board. He has been a project engineer in the Midlands Project Group since 1958.

### £194,759 GREAT NORTH ROAD CONTRACT

Two miles of the Great North Road (A.1), between Ellington Brook Bridge and Alconbury in Huntingdonshire, are to be modernised. Work will start immediately and should be completed by the spring of next year.

Mr. Ernest Marples, Minister of Transport, has authorised Huntingdonshire County Council to accept the £194,759 tender of A. Monk and Co., Ltd., for the work.

Two carriageways, each 24ft. wide, will replace the existing single carriageway, which has a number of sharp bends and is subject to flooding from the Alconbury Brook. The new road will be above flood level, and the old road will be left to serve, in places, as a lay-by, and for access to farm land.

The scheme will continue northward the dual carriageway system recently constructed from Buckden railway bridge to Ellington Brook, and will link with the future Alconbury By-pass.

Forming part of the programme for the comprehensive improvement of the Great North Road, the work will be carried out under the supervision of the Huntingdonshire County Council (county surveyor, Mr. R. E. C. Dorling, B.Sc., A.M.I.C.E., A.M.I.Mun.E.).

### ROSS MOTORWAY CARRIAGEWAYS Ministry's Statement

The Ministry of Transport recently issued the following statement: "It appears there may be some misunderstanding about Mr. Marples' reference to the need for increased width on the Ross Motorway (*The Contract Journal*, July 14). Mr. Marples was referring solely to the hard shoulders and not to the carriageways. He considers that the dual 24ft. carriageways on this motorway should be adequate to meet traffic needs in the foreseeable future."

***International Construction***

## PARLIAMENTARY GROUP SEE ROAD-BUILDING IN STOCKHOLM AND MANNHEIM

A MORE ruthless approach to road widening was urged by Mr. R. Gresham-Cooke, M.P., at a recent conference in London following a visit by 20 M.P.s to inspect traffic control and road-building programmes in Stockholm and the German towns of Mannheim and Ludwigshafen. The visit was arranged by the Roads Campaign Council.

Mr. Gresham-Cooke said that in Germany and Sweden a great deal of motor taxation was devoted to road improvements. In Britain, if even 50 per cent. of the fuel tax had been used there would now be some £200m. a year for the purpose instead of £100m.

In visiting Sweden the party found that the major portion of revenue for roadworks is raised through direct taxation of the road-user. Car licences are proportioned according to the power of the vehicle but an average licence costs some £14, and there is a 40 per cent. motor fuel tax. All tax revenue is spent on highway development, and in all, 95 per cent. of Stockholm's highways qualify for a 95 per cent. grant from the national Government.

The Government has a 1958-67 roads programme worth approximately £600m. Of this amount, some £450m. is to be spent on rural highway development; the remaining £150m. on urban roadworks. The programme is phased in two five-year periods with the major portion of expenditure falling in the second period.

Stockholm's road programme is phased in four periods between 1960-80, as follows: 1960-64, £24.67m.; 1965-69, £38.47m.; 1970-74, £57m.; 1975-79, £52.6m.

Based on the present population this is an expenditure of approximately £8 per head per annum. London in 1959 spent £5m., an expenditure of 10s. per head.

Motorways figure in the national roads programme and some 1,200 miles are planned at an expenditure of about £250m. Similar powers for compulsory purchase of land exist in Sweden where objections to a highway are allowed until final plans are prepared.

### Stockholm's Parking Problems

Like all modern cities Stockholm's major traffic problems finds its roots in the parking question and the city has made plans to accommodate the maximum number of cars that it is convenient for the community to bear. Multi-storey off-street garages are the popular choice in Stockholm because of the granite surface on which the city is built. The City authority owns much of the land in the centre of Stockholm which is leased to private enterprise for development. In this development, the developer must conform to the parking plan (i.e., where garages should be and their capacity) drawn up by the City Fathers.

The city's planning yardstick is an expert estimation of the city's requirement in 1970 and 1990. They do not believe that by that time everyone who has a car will (a) want to use it; (b) be able to use it. Consequently their plans are cast to attract 50 per cent. of the traffic to the public transport system which will be fully integrated with the private transport net.

The city anticipates that it must provide off-street parking space for 20,000 vehicles in the central business area of Stockholm. Whilst the central business area is less than one square mile in area, some 16,000 parking spaces will be provided in 16 garages. In an area of one square mile around the business heart of the city, there will be 21 garages providing space for 21,000 cars, and within a nine square-

mile area of the city centre, 34 more garages will give a total central area parking capacity for something like 50,000 vehicles.

The parking meter has been used to a great extent in Stockholm where they are used to a much more flexible policy than in Britain. For example, they have been placed in three concentric rings around the city. Those on the outer ring, in the suburbs, cost 4d. for a minimum period of four hours. The middle ring cost approximately 9d. for a two-hour period and those in the centre of the city cost 9d. per hour with a maximum standing time of 24 hours.

The traffic plan for Stockholm covers

populations do not exceed 450,000. There the British party saw the redeveloped Rhine bridge (Stradtbruecke) and the ancillary highway developments on either bank—Mannheim, east, and Ludwigshafen, west.

On the Ludwigshafen bank the major feature is an elevated highway running westwards from the Rhine. This elevated, twin-carriageway highway passes at second-floor level past adjacent, low-class properties which are scheduled for demolition and new sight lines for new buildings, with adequate space between them and the new road have been laid down. The road now terminates in four highways running from the original highway, for a



The Ludwigshafen Elevated Highway, showing a ramp leading down to a secondary road which passes beneath the new road

an area of 156 square miles. The major features of the plan, parking facilities aside, are a ring motorway circling the heart of the city and nine motorway radials feeding traffic to the ring motorway from all points of the compass. All the features of motorways are mapped: intersections on different levels; cloverleaf junctions, etc., work has already begun on the plan.

The ring motorway is 10 miles long and, at its furthest point, it is three miles from the city centre. It is cut, north to south, by a diagonal motorway which emanates from a radial to the south of Stockholm. This diagonal motorway is about 4½ miles long and runs adjacent to the business heart of the city on its way north.

In addition, a second diagonal, running east-west and breaking the circle of the ring motorway at the top, is 3½ miles long. All the motorways vary in width from four to eight traffic lanes. There are, in addition, 54 miles of urban motorway in the nine radials.

The geography of Stockholm makes extensive bridge development vital and new or redeveloped bridges—some 20 projects—are planned.

### Germany Visit

In Mannheim and Ludwigshafen an extensive amount of road construction is being carried out, especially in relation to the size of the towns whose combined

short distance, at various levels rather like fingers from a hand. One of these fingers will complete a loop to a second bridge—the Nordbruecke—which is planned to be built about half a mile from the present City Bridge.

### Parking

In Mannheim parking meters are used and cost 20 pf. (about 4d.) per hour. There is also a parking lot which costs 50 pf. for three hours. There is capacity in the city centre to park 3,800 cars. A further 6,500 are planned and an eventual 12,400 places are to be provided.

Two multi-storey garages are under construction by private enterprise on land bought from the city. Two more garages are planned. They can only be built in locations approved by the authorities. It is calculated that all-day parking will cost between 2 DM and 3 DM (3s. 4d. and 5s.).

In Ludwigshafen there are some 25,000 vehicles. Eighty-eight per cent. of the total traffic movement is local to the city. To allow sufficient capacity within buildings to garage the cars they attract, a plan was drawn up some time ago that for every 250 acres, 37.5 acres had to be earmarked for parking in stores, offices, housing development, etc. The authorities specify in plans where parking plots should be and they are left for development by private enterprise.

## Talking of Safety

by  
"DRAGEE"

I INTERRUPTED my tour of the jobs in the East Midlands to visit a site where some sub-contractors were working. A labourer had fallen from a fairly considerable height, and had been rushed to hospital shortly before noon. I received the message as soon as I returned from lunch, and I immediately got into the car and drove 30 miles due west.

When I reached the site, the charge-hand, Coleman, had just returned from the hospital, and he was giving the other men a brief account of the preliminary examination. The report was not very good.

On his return he had stopped to break the news to the man's wife.

"How did she take it?" someone asked.

"How do you think?" said Coleman, curtly. "Same as your missus or mine would, I reckon." He turned quickly on his heel and walked away. There was silence.

I know exactly how he felt. Telling a woman that her husband has been seriously injured is a task most of us would prefer to avoid. I once had a similar experience when a young married man had all but died as the result of an accident at work, and it was my duty to tell his wife. She knew there was something wrong as soon as she answered the door, but without saying anything she motioned me inside, and into a newly decorated front room, smelling faintly of fresh paint.

"Phil's been doing it up," she explained. "I'll open the window and let in some fresh air." She was playing for time; trying to compose herself. But when I told her what had happened it just didn't seem to register.

"I'm sorry," she said, in a level, polite voice, "I'm afraid I don't understand."

I repeated the message, painfully, and added my sympathy. As we went back to the front door she started to cry very quietly. It was like the first mild drops of rain before the storm.

"They are doing everything they can. . . . I will keep in touch. . . ."

She thanked me softly and with careful composure. "Yes, please do," she said.

The door closed and I got into my small car and drove away, without any feeling at all. . . .

I have thought of that little scene quite often since it happened; not on a grey November day as it would in a story, but on fiercely hot afternoon when the fields and the trees and hedges seemed furiously alive, and her Phil seemed very far away as though he, at least, had stopped caring.

*"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.*

And now as I remembered it all over again I felt dreadfully sorry for Coleman.

A few days ago I came across a man perched on a single plank, supported at its extremities, drilling a hole with a hand-brace through the web of a joist. His mate suddenly caught sight of me and knew instantly what my reactions were going to be, and tried to laugh it off.

"Wish you would send a telegram when you're coming," he said.

"That isn't funny and it isn't original," I answered.

They both stopped grinning.

"Look, guv," said the man with the drill. "We've got to do this bit of drilling quick, see? There's no more planks up here, and the job'll be finished by the time Bent's been to fetch some."

"That is also very unoriginal," I said, "and it isn't the whole story. Has it occurred to you that using a board in that way is almost certain to land you in hospital?"

At this point Bert rallied. "Look at the compensation he'll get—just like winning the pools!"

I went straight down to the foreman's office and told him briskly and firmly what I had found. Slightly pink around the collar he went up on the job and presently returned with the two offenders. By this time, I had mastered my feelings, and I proceeded to give the men a carefully controlled but none the less pungent homily on unsafe practices, and their probable consequences to themselves, their relatives and to society in general. I elaborated the picture with horrific visions of accidents, past and future, ending with a creditable description of the proceedings at a Coroner's Court.

"Even if you have lost all desire to live," I wound up, "and your relatives can't stand the sight of you and are cheering themselves hoarse over the compensation they're expecting to get—at least think about us with all the blasted forms we'll have to fill up!"

They went away quietly, looking startled and faintly impressed.

And the way I felt on this particular day, after seeing Coleman returning from the hospital, I was certain that if any reckless joker ever again told me how compensation was just like winning the pools—I'd anticipate his suicidal tendencies with a well-aimed swing of a seven pound hammer.

### STEELWORK FOR KUWAIT BANK

The structural steelwork contract for the new multi-storey building for the National Bank of Kuwait to be erected in Kuwait has been awarded to James Austin and Sons (Dewsbury), Ltd., Dewsbury, Yorks.

### LUXURY FLATS AT HYDE PARK ESTATE

EXPECTED to be completed by the early part of next year, the first major project in the redevelopment of the 84-acre Hyde Park Estate, comprising an eight-storey block of 63 luxury flats, is being carried out for the Hyde Park Property Development Co., Ltd.

Situated on the north side of Sussex Square, London, W.2, the project will consist of one building containing three eight-storey blocks of flats and penthouses, totalling 63 units in all, of which six will be penthouses incorporating studios and terraces on the eighth floor and the remaining 57 flats will have two, three and four bedrooms.

The building will have a reinforced concrete frame with solid 9in. reinforced concrete walls between flats. The flat roof and all floors will be of solid concrete with a layer of fibreglass quilting incorporated for sound insulation, and the outer walls will be of 11in. cavity brickwork with hand-picked multi-coloured facing bricks. Galvanised metal windows will be used generally throughout, and balconies will be faced with mosaic with wired glass infill panels.

On plan, broad stone steps from the pavement give access to the entrance hall of each block through double entrance doors which are set in a wide glass and mahogany screen between green marble reveals, with a timber-lined canopy incorporating recessed lighting. Each entrance hall is illuminated by concealed lighting through a louvered ceiling, and beyond each hall two steps lead to a panelled and carpeted lift lobby with recessed lighting in an acoustic tiled ceiling. There are passenger and trades lifts to each block and also service staircases giving access to the tradesmen's entrances to all but the two-bedroom flats. These lifts are large enough to accommodate a full-sized pram as well as passengers and are fully automatic.

#### Interior Details

Drawing rooms will have concealed lighting and electric fires set in mahogany and marble surrounds. The majority of the flats will have direct access to private balconies facing south, overlooking the square and approached directly through sliding glass doors from floor to ceiling, and in most of the flats the drawing room will inter-connect with the dining room. All but the two-bedroom flats will have dining rooms or dining areas which are also provided with concealed lighting.

Flooring in the entrance hall of each flat will be of mahogany strip boarding, with the kitchen floor finished with linoleum. Remaining floors will be specially prepared to take the occupiers' fitted carpets.

All the flats are planned to have their own central heating and hot water system, the central heating to be provided by a gas-fired system in the kitchen which will heat the Copperad wallstrip skirting heating installed in the drawing room. Concealed gas water heaters will provide ample hot water to bathrooms and kitchens in the larger flats, but in the two-bedroomed flats the gas boiler will provide both heating and hot water supplies during the winter, with an immersion heater in the insulated storage tank for use in the summer. The central heating system will be automatically controlled by thermostat and clock for maximum economy.

Concealed lighting will be installed in the entrance hall and part of the drawing room, and a television aerial point will be found in each drawing room, with a telephone point in the hall. In addition to Wastemaster units, refuse chutes will be installed next to each service staircase.

The architects for the building are Trehearne and Norman Preston and Partners in association with K. W. Bland. The contractors are Wates, Ltd., who, with the Church Commissioners for England, have jointly established Hyde Park Property Development Co., Ltd.



**Trade Section**

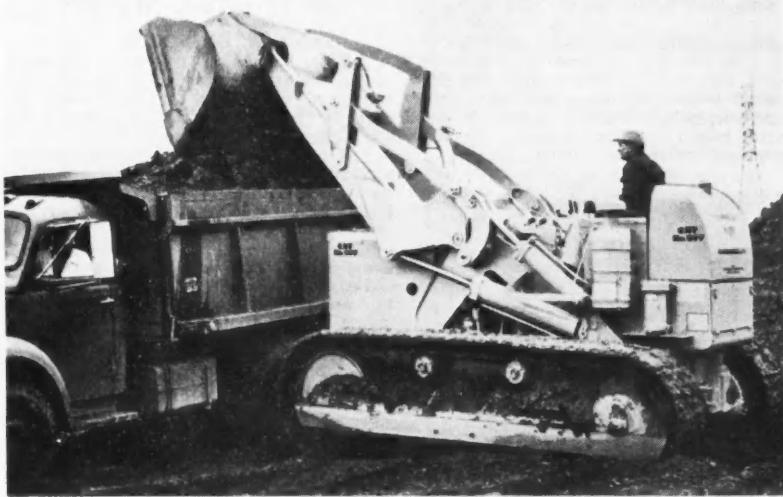
## POWER SHIFT TRANSMISSION ON NEW TRAXCAVATORS

**T**WO new U.S.-built Traxcavators, the 977H and 955H, which both feature power shift transmission, have been introduced by Caterpillar Tractor Company, of Peoria, Illinois, and are now available in this country.

All of the more outstanding features are common to both machines. The single lever shift of the power shift transmission through all phases of the work cycle has

operation with right or left hands. Steering clutch levers, parking brake, in-seat starting controls, throttles and compression release are all mounted on the same column, instruments being located in a recessed panel. The operator's seat, with three vertical and three forward positions available, is fully adjustable and body-contoured.

Retained features in the new machines include automatic bucket positioners and



New Traxcavator 977H

permitted the elimination of the master clutch. A total of four work speeds are available to the operator, with two gear ranges in both the high and low work ranges, and a single stage torque converter is used with the power shift transmission to increase power availability and ease of manoeuvrability. The transmission lever is locked in neutral by a safety gate lever.

Live hydraulic power to the loader mechanism is assured by the pump being driven directly from the torque converter impeller. The operator's compartment has been redesigned to give ease of handling, and a throttle is mounted on each side of the control column, permitting

kickout, 40° tilt back and 47½° tilt at maximum lift, three grouser track shoes and hydraulic track adjusters and steering boosters.

A comprehensive range of buckets, including the side dump, the light material, the heavy material, quarry and skeleton rock buckets, is available. Other attachments are bucket spill plates, bucket teeth, bulldozer blade, counterweight, ripper, pulpwood fork, lumber and logging forks and hydraulic control arrangements for front and rear mounted attachments.

Specifications of the two machines include the following:

H.P.	977H	955H
Bucket capacity, cu. yd.	150	100
Fuel tank capacity (Imperial gallons)	21	13
Forward speeds—low range (m.p.h.)	65.8	43.5
high range	0.1.9	0.2.08
Reverse speeds—low range	0.2.5	0.2.68
high range	0.2.5	0.2.62
Increase in hydraulic lifting force over previous model	0.3.1	0.3.35
Dumping height (inches)	41%	23%
Dumping reach (inches)	144	130
	39.5	41.5

### JOHN ALLEN INTRODUCE SMALL 3/12 TRENCHER

A small trencher and backfiller of U.S. origin is now being sold in this country by John Allen and Sons (Oxford), Ltd., Cowley, Oxford, under the name of the Allen 3/12 Trencher.

The machine, which is tracked, can dig trenches 3in. to 4in. in width to a depth of 5ft. 6in., or 12in. wide to a depth of 2ft. 6in., with a range of intermediate widths and depths. Powered by a 12½-h.p. four-stroke engine, it is 3ft. 1in. high, 3ft. 1in. wide, and 6ft. 4½in. long, with a weight of 1,350lb.

### PAINT WITH SYNTHETIC RUBBER BASE

A new liquid coating with elastomeric properties, called Texseal, is now being marketed through Vicsteel, Ltd., 16 Northumberland Avenue, London, W.C.2, by the Dunlop Rubber Co., Ltd.

Based on Hypalon synthetic rubber, the paint is said to have good flame resistance and to be suitable for continuous service at temperatures up to 250 degrees. A major use for Texseal is as a chemically resistant maintenance paint for plant and structure-work subjected to a corrosive environment.

### News from the Boardroom

**T**HE metal window industry experienced a pretty difficult time in 1959 but, according to Mr. Michael Hope, chairman of Henry Hope and Sons, Ltd., this year shows promise of better things. In his statement to be presented at the sixty-second annual general meeting of the company, to be held at Smethwick on July 27, Mr. Hope says that in spite of increased activity in the building trade, they started 1959 with many contracts on their books which had been taken at uneconomic prices, and throughout the year there was a tendency for window manufacturers to quote ridiculously low prices in an attempt to maintain or increase the minimum output to which each firm had grown accustomed. "Our order book is now far healthier than it was a year ago, and I shall be disappointed if our results in the United Kingdom do not show a fair improvement next year," he states. Although 1959 was a gloomy year, an increase in the ordinary dividend from 11 per cent. to 12½ per cent. less tax is being recommended, "in view of the high proportion of our past profits which have been ploughed back and our exceptionally strong cash position," as Mr. Hope puts it.

**FROM** Peglers, Ltd., the manufacturers of water taps and fittings, etc., comes the news that business is extremely good at the present time. During the past year, night shift work at the Doncaster factory was considerably extended. An evening shift of 4½ hours' duration for married women who had worked at the factory before marriage and who found that they had time to spare was introduced, and the response was immediate and enthusiastic, according to Mr. A. E. Emberton, chairman of the company.

**T**HE recent Aden contract, which is now well under way, together with schools, welfare buildings, and general joinery orders, will enable their factories to be in full production for many months ahead. Mr. H. W. W. Simms, chairman, W. J. Simms, Sons and Cooke, Ltd., recently told members of the company. Activities of the building and civil engineering department cover a very wide area. Private development housing has further expanded and this activity is being extended in the Midlands and Manchester areas. Although reduced volume of work meant lower profits during the past year, Mr. Simms reported at the recent annual general meeting that the liquid position had again improved.

**I**N civil engineering construction, the road programme is not being developed as far as is necessary to meet the demands of the traffic nor to provide an economic and regular volume of work for the facilities in men and machinery available, declares Lord Ashcombe, chairman, Holland & Hannen and Cubitts, in a call for a speed-up in the drive for new roads. Dealing with the company's work at home in 1959, Lord Ashcombe tells shareholders that although keen competition prevailed, the year's trading was satisfactory. Group profit £313,826 (£418,090); dividend 8 per cent.

**D**IFFICULTIES in obtaining building land are not worrying at least one developer, H. C. Janes, Ltd., of Luton. In his review for the year ended March 31, 1960, Mr. H. C. Janes, chairman, says they were fortunate in owning large well-placed estates on which they have been building. These have been replaced by new purchases, and although yearly sales of houses have greatly increased, the company's stock of land at the end of the year was far greater than it was at the commencement. Moreover, new purchases have been made at reasonable prices, which maintains their strong competitive position. Net profit for the year before taxation £376,653 dividend 30 per cent.

**Trade Section**

## SHEET MATERIAL HANDLING DEVICE

A NEW machine for lifting and placing sheets of steel, plate-glass, wall cladding, ceramic tiles, curtain walling, rigid paneling, or any reasonably smooth sheet material, has been developed by Hill Brothers Glass Co., Ltd., Chester Street, Birmingham.

Known as Hill's Robot Plate-Lifter, the machine, which is manufactured by Thos. Adshead and Son, Ltd., Dudley, Worcs., is hydraulically operated and consists basically of a long jointed arm mounted on a turntable on an electric truck. At the end of the arm, four vacuum faceplates, giving a grip of approximately 900lb., are carried on a 5ft. by 6ft. box section frame. Securely held by the faceplates, the sheets can be lifted up, down, across or around, under the guidance of the operator who stands by the controls on the turntable. Precise positioning is possible by further individual movements of the vacuum head and the faceplates themselves. These

movements, plus the mobility of the truck, enable the operator to guide the sheets to the precise location with speed and ease.

When the Plate-Lifter is in the travelling position, the arms fold down along the truck.

The specification of the machine includes the following features:

Turntable rotation: 180 degrees in either direction at 90 seconds per revolution.

Elevation: Maximum height of centre of vacuum head including vehicle: 24ft. attained in 36 seconds.

Horizontal extension: From centre line of rotation to front of faceplates: 15ft. 6in.

Overall length (travelling position): 18ft. Overall width (travelling position): 3ft. 6in. Overall height (travelling position): 7ft. 6in. Maximum working load: 560lb.



The machine placing plate-glass into position

## TRAILERS FOR SWAMP OR ROAD USE

TWO high flotation fully tracked trailers with removable bogies, which can be converted on the spot to conventional road transport, were shipped recently to Port Harcourt for use by Shell-BP Petroleum Development Company of Nigeria, Ltd.

The use of removable tracked bogies means that the trailers can either be used fully tracked in the swamps of the Niger Delta or, fitted with normal rubber-tyred bogies, for road work.

The trailers are standard 28-ton oilfield trailers adapted to the design of Shell engineers by Dyson, Ltd., Liverpool, using specially designed tracked bogies by J. A. Cuthbertson, Ltd., Biggar, Scotland. The rear bogie arrangement is readily removable and can be fitted with either a fully tracked bogie or a conventional rubber-tyred bogie. At the front end, when the tracked bogie is removed, the trailer can be attached to a fifth wheel tractor and operated as a semi-trailer.

Front end dollies are joined to the trailer frame by a normal fifth wheel attachment, thus allowing the trailer to be used in a fully articulated application. The rear

bogie is also fitted with a quick release catch similar to the fifth wheel attachment, with the addition of rubbing plate guides to enable it to slide on to the king pin. Spring loaded pins are used on each side which lock in position when the bogie is properly connected.

When operating on their tracked equipment in the swamps, the trailer will be towed by either Cuthbertson Water Buffalos or Caterpillar D8 tractors. Under normal road conditions, the bogies will be changed and the trailers drawn by Scammell Constructor tractor units.

## MACKAY INTRODUCE NEW PETROL ENGINE

A comprehensive range of air-cooled, single cylinder, two- and four-stroke petrol engines of 1- to 6-h.p., manufactured by Aspera Motors of Turin is now being marketed in this country by Mackay Industrial Equipment, Ltd., Feltham, Mddx.

Further details will be given in our next issue.

## NEW EAVES TREATMENT FOR ALUMINIUM ROOFING

NORAL SNAPRIB aluminium roofing sheet, made by Northern Aluminium Co., Ltd., Banbury, Oxon, is now offered with alternative treatments of eaves and ridge, or eaves only.

A new seal is produced by forming the end of the sheet, making the roof watertight and eliminating the need for separate ridge or eaves fillers. Once the roof sheets have been laid, a simple eaves flashing is hooked up into a slot formed by the folded end of the sheet and secured to the vertical wall; similarly a two-part adjustable ridge assembly is clipped onto the flanges of the roof sheets.

The seal at the eaves end improves the eaves line and increases its rigidity against wind load.

## 6IN. FLOATING SUCTION STRAINER

A Floating suction strainer for use with 6in. hoses has been added to the Dolphin range designed and manufactured by Megator Pumps and Compressors, Ltd., 43 Berkeley Square, London, W.I.

The range now consists of five sizes of strainer, for use with 1½in., 2in., 3in., 4in. and 6in. hoses. This latest version, which is capable of dealing with water flow at rates of up to 750 gallons per minute, is intended for a wide variety of industrial uses, such as cooling water intakes from rivers and open reservoirs, and for irrigation and other purposes where high water inputs are required.

## GABRO SITE SAW BENCH

A Mark II version of the Gabro site saw bench, by Furnace Controls, Ltd., 35 Milk Street, London, E.C.2, incorporates a compound mitre cutting attachment. This uses a cradle to carry the timber in the place of the usual single-sided fence, and is provided with rollers above and below the bench which ensure smooth action and prevent the attachment from tipping. It is used for right-angled cross-cutting or cutting compound angles such as for jack rafters. The setting of the attachment is simplified by large graduations and single locking for both adjustments.

The machine is powered by a Lister 4½-h.p. diesel, Villiers 5-h.p. petrol engine or S.E.M. 5-h.p. three-phase electric motor. Drive is by a triple vee belt to the 22in. heavy gauge saw blade, which cuts to a maximum depth of 8in.

## TRADE NEWS IN BRIEF

Tanking with mastic asphalt is the subject of an illustrated booklet published by The Natural Asphaltine Mine-Owners and Manufacturers Council, 14 Howick Place, London, S.W.1.

The share capital of Wood Preservation, Ltd., London, S.W.1, has been acquired by the British Rating Co., Ltd., East Grinstead, Sussex.

The Mercantile Credit Co., Ltd., have opened a new branch office at Pearl Assurance Buildings, Bradford. Tel.: Bradford 21552. Mr. I. Schofield has been appointed sub-branch manager.

A new company, Mercantile Leasing Co., Ltd., has been formed by Mercantile Credit Co., Ltd. Its activities will be confined solely to machinery and equipment leasing.

The technical principles underlying automatic chlorination are described in two illustrated brochures recently published by Wallace and Tiernan, Ltd., Power Road, London, W.4.

Stone-Chance, Ltd., have moved their premises from 28 St. James's Square, London, S.W.1, to Schomberg House, 82 Pall Mall, London, S.W.1.

Thos. P. Headland, Ltd., 10 Melon Road, Peckham, London, S.E.15, have been appointed official stockists of Phillips "Red Head" anchors.

Marshall Andrew and Co., Ltd., have moved to their new head office building at St. Andrew's House, 40 Broadway, London, S.W.1. Tel.: Whitehall 1055.

**Trade Section**

## MARION 17 CU. YD. SHOVEL FOR UNITED STEEL

A 17 cu. yd. Marion stripping shovel will shortly be assembled at the United Steel Company's opencast iron-ore mine at Colsterworth, near Grantham, Lincs.

The 2,000,000lb. machine, which is being supplied by Blackwood Hodge, will be the largest stripping shovel in use outside the American Continent. It has been designed by the Marion Power Shovel Company of Marion, Ohio, U.S.A. Part of it will be constructed by the designers and part by Babcock and Wilcox, Ltd., at their Dalmuir Works in Scotland. All assembly on site will be carried out by Blackwood Hodge.

**145ft. Boom**

The type 5323 will cost approximately £1m. The machine will move 600yd. of earth per operating hour. The machine will operate a 17 cu. yd. dipper on a 145ft.

boom and will have a maximum cutting radius of 148ft. 6in. and a dumping height of 104ft. 3in.

Power for hoist, swing, crowd and propulsion is provided by a single 900-h.p. A.C. motor driving D.C. generators. All operating control equipment is grouped in the operators cab and arranged for one man operation.

The machine stands on four pairs of crawler tracks which are located on each of the four corners of the lower frame. Some idea of the excavators immense size can be drawn from the fact that each of the eight tracks has a width of 3ft. and a length of 15ft. 8in. A single track shoe weighs 380lb.

The pairs of tracks are mounted to the lower frame by way of hydraulic jacks. These jacks automatically ensure that the machine remains on an even keel when operating and travelling over uneven ground.



Marion 5323 operating in United States

**GLAZED ROOF VENTILATOR**

To prevent restriction of natural lighting in factory roofs, Greenwood's and Airvac Ventilating Co., Ltd., Beacon House, Kingsway, London, W.C.2, have produced a new extractor with a glazed top.

Of aerodynamic design, the unit can be fitted on glazing or corrugated sheeting. Construction is of heavy gauge hardened aluminium of riveted and welded construction and reinforced cast wire glazing, secured with clamping strips. Control is manual, or thermostatically operated fibre-glass motorised shutters can be provided where heat conservation is important.

**SOLID FUEL DOMESTIC BOILER**

Federated Foundries, Ltd., 4 Stratford Place, London, W.1, have added to their range of solid fuel domestic boilers a thermostatically controlled unit with a continuous output of 25,000 B.Th.U. an hour.

This Sofonomic No. 3 is designed with a boiler heating surface of 4.2 sq. ft. and will provide normal hot water service plus space heating from 85 sq. ft. of radiator surface. Measuring 28½in. high by 17½in. wide by 19in. deep, it incorporates a raised base so needs no special plinth.

### COMBINED BENDER, CUTTER AND NOTCHER

The Kingsland Engineering Co., Ltd., 25-37 Hackney Road, London, E.2, have introduced a machine which is a combined angle-iron bender, cutter and notcher.

The operations consist of cropping angle-iron, 2in. by 2in. by ¼in., notching angle-iron 2in. by 2in. by ¼in., and bending angle-iron and flats up to 2in. by 2in. by ¼in. For cutting straight and square, a rest and positive hold-down is fitted. A rod aperture for ¼in. rods is also provided.

A clamping block on the notching head enables any thickness up to ¼in. to be notched, and a vice principle for bending ensures accuracy and distortion free bends.

### PRIESTMANS ORDER E.M.I./CONTROLLED DRILL

Priestmans, Ltd., Hull, have placed an order with E.M.I. Electronics, Ltd., for an E.M.I./Wadkin electronically controlled drilling machine, worth nearly £10,000. It will be used for making drill jigs and for other toolroom uses, including production of prototype components.

## FACTORY EQUIPMENT EXHIBITION

**Plans for Manchester Show**

DETAILS have now been announced of the Factory Equipment Exhibition to be held at Belle Vue, Manchester, from September 21-October 1. Covering an area of more than 150,000 sq. ft., it will be the largest exhibition ever to be held in Manchester.

Some 240 leading companies will be displaying equipment and machinery and the exhibition has the support of over 250 trade and technical associations, institutions and societies.

The object of the exhibition is to show the way to improvements in efficiency in existing works and assisting directly in the planning of new undertakings. It is being sponsored by the Manchester Chamber of Commerce, *The Financial Times* and *Industrial Equipment News*.

### LOW COST ILLUMINATED CEILING

An illuminated ceiling which can be supplied and installed at a cost of about 5s. 6d. per sq. ft., excluding lights, has been introduced by Luminated Ceilings, Ltd., Alliance House, Caxton Street, London, S.W.1.

Called the Westminster ceiling, it is based on 3ft. square diffusing panels supported by a lightweight aluminium track suspended from the structural ceiling. Daylight from laylights, or artificial lighting from lamps in the plenum, is diffused through the panels so that the space below is evenly illuminated, without glare or shadows.

The diffusing medium is a translucent sheet of flexible p.v.c. It is stretched over a channel section aluminium frame which forms the perimeter of the panels with a plastics core which is forced into the channel to lock the diffuser permanently in tension. The diffusers are supported on all four sides by the flanges of an aluminium track of inverted T-section, suspended from the true ceiling. Complete weight of the ceiling is less than 7oz. per sq. ft.

### RADIATION USE POLYSTYRENE DUCTING

Lightweight ducting prefabricated from expanded polystyrene is being used by Radiation, Ltd., for a gas-fired Ductair warm air central heating system being installed throughout a 200-bungalow estate at Goring-by-Sea, Sussex.

Expanded or foamed polystyrene, from which the ducting is made, is a white insulating material with cellular structure consisting of 98 per cent. still air. It forms a rigid board which is resistant to chemicals, water and water vapour, and is rot- and vermin-proof, with no smell. Its weight is 20oz. per cu. ft. and the standard grade has a working maximum temperature of 195 degrees F.

The ducting is manufactured under the name of Warmaflex by Wola Products, Ltd., Tangmere, Sussex.

### CHIPPING AND SCALING HAMMER

A new chipping and scaling hammer introduced by Consolidated Pneumatic Tool Co., Ltd., 232 Dawes Road, London, S.W.6—the CP-455-L—incorporates a jet of high velocity air which keeps the workpiece clear of chippings.

The chipper uses a piston of 15/16in. bore and 1in. stroke which gives 4,200 blows per minute at a pressure of 90 p.s.i. A new type "pulley valve" gives smooth throttling and accurate control. The net weight of the tool is 4½lb. and the overall length is 10½in. The size of the air inlet thread is ¼in.

**Trade Section****NEW COMPANIES**

*The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:-*

Danak, Ltd., Back Major Street, Stockton-on-Tees, Co. Durham, builders, £100. Permanent directors: George Dack, 7 Albert Road, Fairfield, Stockton-on-Tees; Gordon Atkinson, 19 Reigate Close, Roseworth, Stockton-on-Tees; Thomas Nicholson, 34 Hill Street East, Stockton-on-Tees.

Cobham Properties, Ltd., builders, £1,000. Directors: To be appointed by the subscribers. Subscribers: Mrs. Joan P. S. Perring, 33 High Street, Cobham, Surrey; Susan M. Balcomb, Gable Cottage, Burstead Close, Cobham.

Jack H. Lang (Devon), Ltd., builders, £500. Directors: Jack H. Lang and Mrs. F. E. Lang, Townsend House, Townsend Hill, Mannamead, Plymouth.

Frank L. Dumont, Ltd., builders, £100. Directors: Frank L. Dumont and Mrs. Doris I. Dumont, 2 Avondale Road, E.17.

Henry Contemporary Building Construction Co., Ltd., £1,000. Directors: Sydney M. Kalinsky, 4 St. George Street, W.I.; Profuchandra M. Rajani, 10 Laurel Road, S.W.13.

Robert F. P. Fox and Son (Minor Works), Ltd., Downend House, Downend, near Bristol, builders, £2,000. Directors: Robert F. P. Fox, Stockwell House, Westerleigh Road, Downend, Bristol (permanent); Beryl P. Fox, address not stated.

H. Wilkinson (Builders), Ltd., £5,000. Directors: Harold Wilkinson, senior (permanent), and Mrs. Lillian Wilkinson, 11 Stenton Road, Greenhill, Sheffield.

John Jeffrey (Builders), Ltd., £500. Directors: John Jeffrey, 39 Balliol Road, Kempston, Bedford; Walter H. Watts, 64 St. Martins Avenue, Luton.

M. R. Babbage, Ltd., 9 Weston Road, Southend-on-Sea, builders, £3,000. Directors: Malcolm R. Babbage and Mrs. Jill P. Babbage, Vandoulay, Farnbridge Road, Maldon, Essex.

S. F. Davidson and Son, Ltd., 11 Archibald Terrace, Newcastle upon Tyne, 2, builders, £1,500. Directors: Alan F. Davidson and Samuel F. Davidson, 30 Church Avenue, Gosforth, Newcastle upon Tyne, 3; Edward Burrows, 15 Meadow Road, Monkseaton.

W. Clarke (Llandaff), Ltd., 98 Cardiff Road, Llandaff, Cardiff, builders, £5,000. Directors: Fredk. P. Parker, 80 Wentloog Road, Rumney, Cardiff; Wm. R. P. Clarke, Aldersyde, Radnor, Glam.

Perkins Building Co., Ltd., Kinvis, Carrington Lane, Milford-on-Sea, Lympington, £100. Alfred W. Perkins, Kinvis, Carrington Lane, Milford-on-Sea, Hants, signs as director.

Fletcher Estates (Bell Vue), Ltd., Whitchurch Road, Shrewsbury, Salop, builders, £5,000. Directors: Gilbert R. Fletcher, Field House, Meole Brace, Shrewsbury; Alfred Fletcher, Upper Berwick, Shrewsbury; William B. Fletcher, Lonsdale, Evington Lane, Leicester.

Freeman (Builders), Ltd., £500. Directors: Sydney Freeman and Mrs. W. Freeman, 3 Rosamond Drive, Bradway, Sheffield.

G. R. Niney (Plant Hire), Ltd., Station Road, Wheatley, Oxford, £100. Directors: Geoffrey R. Niney and Mrs. Evelyn Niney, Station Road, Wheatley, Oxford.

J. A. Cain (Builders), Ltd., £5,000. Directors: To be appointed by subscribers. Subscribers: Mrs. Hannah H. Cain and John A. Cain, 50 Emmanuel Road, Southport.

M. Ventham, Ltd., Hawkley House, West Liss, Hants, builders, £1,000. Directors: Mrs. Eileen D. Ventham and Marcia A. Ventham, Hawkley House, West Liss, Hants.

R. Cooper (Builders), Ltd., 23 Woodcote Place, West Norwood, S.E.27, £3,000. Directors: Ronald Cooper and Olive E. Cooper, 23 Woodcote Place, West Norwood, S.E.27.

Stanvic (Building Products), Ltd., 66 Silver Street, Enfield, Middx., £1,000. Directors: Alfred V. G. East, Henleys, Dartford Road, Bexley, Kent; Stanley T. East, 60 Campbell Road, Gravesend; Miss Phyllis S. Bradshaw, 41 Hawksley Road, N.16.

Moss, Son and Co., Ltd., builders, £2,000. Directors: Wm. R. Moss, address not stated; Wm. R. Moss, Junr., 2 Hall Cottages, Drayton, Norwich; John W. Cole, Winston, Chelmsford Road, Holland on Sea.

Anthony Lynch and Sons, Ltd., builders, £1,000. Anthony Lynch, 47 Ivor Road, Sparkhill, Birmingham, signs as director.

Combus Contractors, Ltd., 131 High Street, Teddington, Middx., builders, £100. Directors: Rawdon F. H. Seager, 1 Horsell Park Close, Horsell, Woking, Surrey; Ernest W. R. Emerson, 24 Snelley Court, Hanley Road, N.4; Walford C. Howell, 131, High Street, Teddington, Middx.

J. G. Brearey, Ltd., The Smithy, Village Road, Lower Village, Heswall, Ches., building contractors, £10,000. Directors: James G. Brearey and Mrs. Emily M. Brearey, Glenfield, The Lydiate, Lower Village, Heswall; Richard H. Owen, 50 Wellington Road, Liverpool, 16.

Dwyer (Contractors), Ltd., Carlton Chambers, High Street, Newport, Mon., builders, £2,000. Directors: Dennis J. Dwyer, 29 Oakfield Road, Newport, Mon.; Arthur K. Miller, 16 Hamilton Street, Newport, Mon.; Sheila M. Curran and Peter J. Curran.

Kirkfield Estate (Grassington), Ltd., Kirkfield, Grassington, Skipton, Yorks., civil engineering contractors, £2,000. John K. Lockyer, Kirkfield, Grassington, Skipton, signs as director.

Reeds Plant Hire, Ltd., 6 Surrey Street, W.C.2, £100. Directors to be appointed by subscribers. Subscribers: Stanley H. Lucas and Francis A. Dean, 6 Surrey Street, W.C.2.

S. H. P. Cowdy, Ltd., 66 Rhiewina Hill, Whitchurch, Glam., builders, £500. Directors: Samuel H. P. Cowdy and Mrs. I. T. Cowdy, 49 St. Ambrose Road, Cardif.

Dedman and Skipper, Ltd., 352 Ware Road, Hoddesdon, Herts., builders, £1,000. Directors: Geoffrey L. Dedman, 352 Ware Road, Hoddesdon, Herts.; Derek W. Skipper, 71 Homefield, Waltham Abbey, Essex. Newstruct, Ltd., builders, £5,000. Directors: John B. Nicholson, 73a Lake Lock Road, Stanley, near Wakefield; Wm. Balmforth, 1 Finkin Avenue, Finkin Lane, Stanley, 299 Brodie Avenue, Liverpool, 19.

Scott Bros. (Gawthorpe), Ltd., plant hirers, £500. Directors to be appointed by subscribers. Subscribers: Jean Herbert (company director) and Thos. A. Herbert (barrister), 156 Strand, W.C.2.

Benfleet Hall (Cobham), Ltd., 33 High Street, Cobham, builders, £1,000. Directors to be appointed by subscribers. Subscribers: Joan P. S. Berring, 33 High Street, Cobham (secretary); Susan M. Balcomb, Gable Cottage, Burstead Close, Cobham (secretary).

Hayday and Waite, Ltd., 14-18 High Holborn, W.C.1, building contractors, £500. Directors: Fredk. C. Hayday, 645b Holloway Road, N.19; Fredk. G. P. Waite, 35 Dorset Road, Ashford, Middx.; Mrs. Irene Hayday and Mrs. Bridget Waite.

Nick Edwards (Ready Mix), Ltd., Woodlands, Altami, near Mold, Flint, ready mixed concrete, £20,000. Directors: Ezekiel Edwards and Bessie Edwards, Woodlands, Altami, near Mold, Flint.

Frank Wood (Builders), Ltd., £1,000. Permanent directors: Frank A. Wood and Mrs. Ivy Wood, 43 London Road, Horndean, Hants. N. R. Morter, Ltd., 96 Tilehouse Street, Hitchin, Herts., builders, £2,000. Directors: Norman R. Morter, 10 Oakleaf, Great North Road, Welwyn, Herts.

Hill Plant Hire, Ltd., 83 Broadway, Bexleyheath, Kent, plant hire and haulage contractors, £1,000. Directors: David Hill and Patricia Hill, 69 Townley Road, Bexleyheath, Kent.

Ashchurch Construction Co., Ltd., 20 Ashchurch Park Villas, Shepherds Bush, W.12, £1,000. Directors: Colman Mulkerrins, 40 Appleford Road, W.10; James F. Gallagher, 20 Ashchurch Park Villas, Shepherds Bush, W.12.

M.P. Excavators, Ltd., £6,000. Directors: Paul E. Fleetwood, 8 Carlton Avenue, Shelton Lock, Derby; Shirley M. Hood, 29 Melton Avenue, Littleover, Derby.

P. G. Wellfair, Ltd., public works contractors, £2,000. Directors: Peter G. Wellfair, 93 Carlyle Avenue, N.W.10; Ian H. Garnham, address not stated.

R. and B. Giblin, Ltd., 18 Brades Road, Brades Village, Oldbury, Worcs., plant hirers, £4,000. Directors: Robert A. Giblin, 15 Freda Rise, Tividale, Tipton; Brian M. Giblin, 25 Woodfield Avenue, Pensnett, Brierley Hill.

Trenada Builders, Ltd., £100. Directors: Not named. Subscribers: Dorothy M. Graeme and Gordon V. Graeme, 61 Fairview Avenue, Gillingham, Kent.

H. Mekin and Co., Ltd., builders, £10,000. Directors: Harry Mekin and Marjorie V. Mekin, 14 Omberley Avenue, Skegby, Sutton-in-Ashfield.

**"DARLINGTON" TRAILER MOUNTED WINCH**

**A** TWO-TON line pull portable trailer mounted winch has recently been introduced by Darlington Engineering Co. (Gateshead), Ltd., Queensway, Team Valley Trading Estate, Gateshead-on-Tyne, 11.

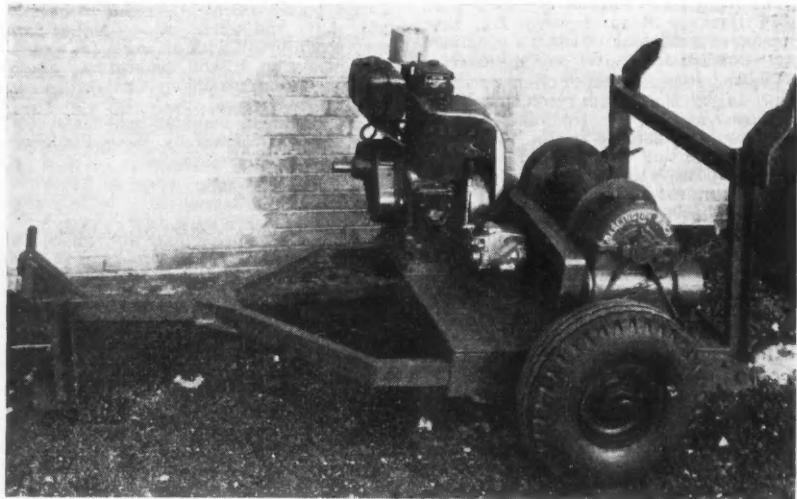
Complete with sprag anchorage and powered by a Petter AVA1 diesel engine it can be fitted with alternative three forward and reverse gearboxes to give the following line speeds:

A.	B.
1st. 15.51 ft./min.	1st. 17.06 ft./min.
2nd. 22.93 ft./min.	2nd. 25.22 ft./min.
3rd. 35.83 ft./min.	3rd. 39.41 ft./min.
Reverse 11.2 ft./min.	Reverse 12.32 ft./min.

The complete unit is mounted on a substantial fabricated steel chassis fitted with 7.50 x 10 tyres. A self-sustaining worm-shaft brake is fitted to the winch, which enables loads to be raised, held, and lowered under power, using clutch and gearbox only.

Drum capacity is 550ft. x 1/2in. diameter steel wire rope; 400ft. x 9/16in. diameter and 350ft. x 1/2in. diameter. Weight complete is 16 cwt.

The price of the unit, including front and rear sprags but excluding wire rope is £350 net ex works. Road brakes and trailer hitch optional extras £15 net ex works.



The trailer-mounted winch

# Current Constructional Activities

## PROJECTS • CONTRACTS • AWARDS

**T**HIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the *Journal*.

### BUILDING AND DECORATING (See also Housing Schemes)

**Arbroath, Angus.**—Dean of Guild Court have approved alterations to 11-15 Millgate, for John M. Stephen, Silverwells, Arbroath. Estimated cost £7,000.

**Aylsham, Norfolk.**—Ministry have approved plans for the erection of an old people's home, for C.C. Estimated cost £71,000.

**Ayr.**—Dean of Guild Court have approved the following shops and offices at 4-5 Killoch Place, Burns Statue Square, for Parkhouse Development Co., Ltd., 31 Beresford Terrace, estimated cost £50,000; garage premises, motor salerooms and offices, between Sandgate and Fort Street, for A. and D. Fraser, 65 Springell Avenue, Maxwell Park, Glasgow, £8,500; workshop, for William C. Gray and Son, Ltd., Newton Carpet Works, McCall's Avenue, £3,000.

**Barking, Essex.**—B.C. recommended to approve in principle plans for the erection of an eight-classroom block as stage 2 of the development of Eastbury Secondary Schools. Estimated cost £28,000.

**Co. E.C.** have approved schemes for the provision of a kitchen and dining hall at Manor Infants' School, adaptations at Roding Primary School and additional accommodation at Park Modern Secondary Schools, for B.C. Estimated cost £16,690, £5,400 and £13,500, respectively.

**B.C.** recommended to submit to C.C. and Home Office for approval plans for the erection of proposed new Civil Defence Training Centre.

**Barnsley, Yorks.**—B.C. recommended to approve in principle for submission to Ministry for grant aid, plans for proposed workshop, with toilet, canteen, cloakroom and administrative facilities and accommodation for 40 people at the Handicapped Persons' Centre, estimated cost £60,000; instruct Lanchester and Lodge, architects, 10 Woburn Square, London, W.C.1, to complete, for submission to Home Office for approval, plans for the proposed new police headquarters.

**Battersea.**—B.C. recommended to appoint W. V. Zinn, Collingham House, Eagle Street, London, W.C.1, as the consulting engineer for the Winstanley Road section of the Winstanley Road area housing scheme.

**Blackburn, Lancs.**—B.C. recommended to approve scheme for erection of public conveniences at Corporation Park and Mill Hill Gardens; Borough Engineer to be asked to prepare plans, etc., for provision of an adult training centre at Gladstone Street and estimate for adaptation of Mowbray Lodge for residential accommodation; to approve scheme for dressing accommodation and improvement at Belper Street swimming baths.

**Buckhaven, Fife.**—South Eastern Regional Hospital Board, 11 Drumsheugh Gardens, Edinburgh 3, propose a 60-bed extension to Randolph-Wemyss Memorial Hospital.

**Cardiff.**—City Council recommended to proceed with scheme for improvements and extensions at Roath abattoir. Estimated cost £210,000.

**Carlisle, Cumb.**—West Cumberland Farmers Trading Society, Ltd., Whitehaven, are to erect poultry-packing station at Harraby Green to plans by Graham, Roy and Nicholson, 6 Paternoster Row; G. W. Danson, 54 Lowther Street, is the architect for office additions in Milbourne Street, for Gleneden Textiles, Ltd.

City Council recommended to invite tenders for erection of two family group homes. Estimated cost £10,000.

**Chelmsford, Essex.**—B.C. recommended to proceed with the preparation of drawings

for the construction of public conveniences at the Tower Gardens, estimated cost £4,100; submit to Ministry for approval sketch plans for proposed indoor swimming pool, £200,000.

**Chester.**—B.C. recommended to invite tenders for erection of new cloakroom accommodation for female staff at the Town Hall.

**Coatbridge, Lanarks.**—County Education Authority propose extensions at St. Patrick's High School. Estimated cost £464,000.

**Darlington, Dur.**—Plans prepared for extensions in Springfield Road, for Stephenson and Hawthorn, Ltd., apprentices' school in Whessoe Road, for British Transport Commission, and new welding shop in Brinkburn Road, for Whessoe, Ltd. (the firms concerned have prepared their own plans); R. Cowan, 20 Finkle Street, Stockton-on-Tees, is the architect for hotel at Coleridge Gardens, for J. W. Cameron and Co., Ltd., Lion Brewery, West Hartlepool; E. Gordon Crofts, 49 Grange Road, prepared plans for factory McMullen Road industrial estate, for C. H. Pugh, Ltd.

**Daventry, Northants.**—B.C. recommended to approve in principle scheme for the first phase of the swimming pool and prepare plans and documents for Ministry approval. Estimated cost £30,000.

**Ealing, Middx.**—C.C. recommended to approve scheme for the construction of a remand home at Heath Lodge. Estimated cost £66,500.

**Eastbourne, Sussex.**—B.C. recommended to apply for sanction to borrow £2,750 for the provision of arts and crafts accommodation at the Chelsea College of Physical Education.

**Edinburgh.**—The Governors propose an extension to the College of Art. Estimated cost £250,000.

**Enfield, Middx.**—C.C. recommended to approve schemes for the erection of a dutch barn at North Lodge Farm and covered yard with parlour and dairy and installation of water supply at Ferney Hill Farm. Estimated cost £1,175 and £4,925 respectively.

**Glasgow.**—Housing Committee have approved a scheme to erect 134 garages. Estimated cost £28,000.

**Grantham, Lincs.**—B.C. recommended to approve the erection of a further 12 garages at Canberra Crescent site.

**Guildford, Surrey.**—B.C. recommended to approve scheme for six additional lock-up garages at Gardner Road.

**Hadleigh, Suffolk.**—Sanford and Harding, 14 Lower Brook Street, Ipswich, are the architects, for a factory at Bradfield Yard, Angel Street, for D. Gurteen and Sons, Ltd., Chauntry Mills, Haverhill. Scheme in its very early stages.

**Hartlepool, Dur.**—Borough Engineer to prepare fresh plans for swimming baths. B.C. approved in principle the erection of 18 shops for redevelopment of the Northgate area; Thompson's Red Stamp Stores, Ltd., Red Stamp House, Durham Road, Gateshead, to erect shop and housing accommodation on the King Oswy Drive shopping centre.

**Hereford.**—City Council recommended to approve plans for swimming pool and filter house at The Broadlands (Girls High School), Aylestone Hill, for the Parents' Association (C. Corey, architect, 6 Victoria Street, Hereford); factory extension and toilet block at Commercial Road, for Westland Motor Co., Ltd.

**Hillingdon, Middx.**—C.C. recommended to approve scheme for adaptations at Moorcroft to provide a weekly boarding home for sub-normal children. Estimated cost £11,450.

**Ipswich, Suffolk.**—B.C. have approved modified layout for the proposed civic centre, including the provision of an underground car park; the appointment of Davis, Belfield and Everest, 9 Ashley Place, London, S.W.1, as quantity surveyors, and R. F. Galbraith, Cromwell House, Fulwood Place, London, W.C.1, as structural consulting engineer for the first stage of the scheme. Architects are Vine and Vine, 12 Tudor Chambers, Station Road, Wood Green, London, N.22. Estimated cost £1,493,230.

**Isleworth, Middx.**—C.C. recommended to approve scheme for the erection and equipment of an adult training centre in the grounds of Acton Lodge. Estimated cost £37,690.

**Kensington.**—The architects for the proposed Wolfson laboratory at Imperial Institute Road, London, S.W.7, for The Imperial College of Science and Technology, are Architects' Co-Partnership, 44 Charlotte Street, London, W.1.

The quantity surveyors are Davis, Belfield and Everest, 9 Ashley Place, S.W.1.

**Leamington Spa, War.**—B.C. recommended to prepare sketch plans for a bandstand, cafeteria and convenience at the Pump Room Gardens; approve the provision of divisional police headquarters and a Crown office building in an area between Hamilton Terrace and Newbold Terrace at rear of Euston Place.

B.C. recommended to approve, subject to conditions, plans for a church hall (first section) at Cublington Road, for the Rev. Llewellyn George, Lillington Vicarage, Vicarage Road.

**Leeds.**—Town Planning Committee have approved plans for new R.C. church adjoining Corpus Christi R.C. School, Neville Road, Halton Moor, for Trustees of Corpus Christi R.C. Church, and plans for erection of factory, canteen, offices, etc., on the Kirkstall Road light industrial estate, for Executex Clothes, Ltd., 98 Kirkstall Road.

**Leicester.**—Allcock and Grieves, 11 Leicester Road, Loughborough, are the architects for the erection of premises at Vaughan Way, for the Uneedus Hosiery Co., Ltd., 69-77 East Bond Street.

**Leicester.**—City Council recommended to approve plans for the first phase of the community centre at corner of Sturdee Road and Hillsborough Road, Eyres Monsell estate, estimated cost £18,250; in principle modified scheme for new central baths, £348,000.

City Council recommended to approve the sale of land near Humberstone Lane to Oakland Pressool Co., 191 Willow Street, for industrial development, and at Scudamore Road to the Lancashire Midlands Yorkshire Carriers, Ltd., for the erection of a depot for sorting parcels.

**London.**—City of London Corporation recommended in connection with the Barbican redevelopment scheme, to appoint Chamberlin, Powell and Son, 15 Avenue Studios, Sydney Mews, London, S.W.3, as the architects; Davis, Belfield and Everest, 9 Ashley Place, London, S.W.1, as the quantity surveyors; Ove Arup and Partners, 8 Fitzroy Place, London, W.1, as the structural engineers; and G. H. Buckle and Partners, 2 Harrington Gardens, London, S.W.7, as the services engineering consultants.

**London.**—City of London Corporation have appointed W. J. Perkins and Partners, 26 Victoria Street, London, S.W.1, as the consulting engineers, and Gardiner and Theobald, 49 Bedford Square, London, W.C.1, as the quantity surveyors, in connection with the Billsgate Market improvement scheme. Estimated cost £289,500.

**Luton, Beds.**—C. W. Shrimplin, Prudential Chambers, Upper George Street, is the architect for the erection of a Methodist Church at corner of Bedford Road and Birdfoot Lane, Warden Hill, for the Luton Methodist Circuit. Scheme only at sketch plan stage.

**Manchester.**—City Council recommended to apply for sanction to borrow £1,200 for provision of garage at Debdale Park; £3,950 for provision of showers and toilets, sports pavilion, Debdale Park; £421,643 for extension of premises and erection of hostel for College of Householdcraft; £4,409 for provision of school meals accommodation at Bishop Bilsborrow R.C. Junior School; £40,000 for new laboratory at Denton, in connection with Longdendale filtration scheme; and £64,330 for provision of 14 additional family group homes.

**Manchester.**—Estates Management Committee have approved sites for construction of 206 garages at Wythenshawe.

**Manchester.**—Lancs. Co. E.C. have approved in principle the establishment of a new College of Music. Estimated cost £300,000.

**Ministry.** have approved in principle scheme for first phase of conversion of Ministry of Works premises in Burton Road to provide accommodation for nurses at South Manchester Hospital. Working drawings and bills of quantities to be prepared prior to obtaining tenders, with a view to work commencing during 1960-61.

**Middlesbrough, Yorks.**—B.C. to proceed with the erection of a maternity and child welfare clinic at St. Hilda's.

**M.D.M. Investments, Ltd.** are negotiating for lease of a two-acre site in the Marton Road area for the erection of an hotel with 204 bedrooms, public rooms, restaurant, etc.

petrol service station, six shops and flats. John Fullerton and Tusler, 142 Wigmore Street, Portman Square, London, W.I., are the firm's surveyors in connection with the scheme.

Newcastle Regional Hospital Board are to erect department of physical medicine at General Hospital, and a cobalt unit is proposed at North Ormesby Hospital. P. H. Knighton, chief architect.

**Newcastle upon Tyne.**—City Council to build library and child welfare centre on Longbenton housing estate (Unit 4).

City Council's scheme for a new central library at the junction of Saville Row and Higham Place has been approved in principle. Estimated cost £485,000.

Plans are being prepared by Spence and Price, 26 St. Mary's Place, for a meeting hall at Jesmond Road for the Society of Friends; alterations and additions are proposed to Barclays Bank, Collingwood Street. The architects are L. J. Couves and Partners, Grainger Chambers, Hood Street; Freeman, Hardy and Willis, Enterprise House, Rutland Street, Leicester, are to carry out extensions to their retail shop premises at 78 Clayton Street; additions are proposed to R.A.O.B. Club, Heaton Road. The architects are Morrison and Short, 11 Clayton Road; plans are being prepared by Stephenson, Gillis and Partners, Saville Chambers, North Street, for showroom and garage extensions in Osborne Road, for A. R. F. Mackie, Osborne Garage.

It is expected that work will start next year on the construction of new swimming baths on the Montagu estate, for the City Council. Cackett, Burns Dick and MacKellar, architects, 21 Ellison Place, Newcastle upon Tyne. Estimated cost £250,000.

**Norfolk.**—C.C. have approved scheme for new council offices on a site to be decided upon. Estimated cost £1.1m.

**Norwich.**—City Council recommended to approve layout for six garages and hard-standing for three vehicles at Cadge Close, Earlham West housing estate; approve design and invite tenders for the erection of the central library. Estimated cost £233,000.

**Petersfield, Hants.**—C.C. have approved the erection of a divisional office at the road depot at The Borough. Estimated cost £6,000.

**Plymouth, Devon.**—City Council recommended to approve, for submission to Ministry for approval, sketch plans for the proposed primary school at Charlotte Street and new school meals kitchen and dining room at North Prospect Primary School. Estimated cost £52,600 and £9,750, respectively.

City Council recommended to approve scheme for the erection of four shops and four flats facing on to Hornchurch Road, estimated cost £21,621; prepare scheme for the provision of hot water services and certain other standard fittings in 206 1919-39 houses.

**Rowley Regis, Staffs.**—B.C. recommended to approve, subject to county planning approval, scheme for 11 garages on open space between Wheatsheaf and Middleton Roads.

**Rugby, War.**—B.C. recommended to approve, in principle, sketch plans for a slaughterhouse at the Cattle Market. Estimated cost £35,000.

B.C. recommended to approve revised plans for milk distribution depot, rear of Benn Street, for Midland Counties Dairy (Coventry), Ltd., Gulson Road, Coventry; new shops and warehouse and two self-contained flats at Overdale Lane, for Rugby Industrial and Provident Co-operative Society, Ltd., 45 Chapel Street.

**St. Albans, Herts.**—City Council recommended to apply for sanction to borrow £2,200 for extending the garages at the House Refuse Depot.

**St. Pancras.**—Work is expected to start early next year on the erection of a new headquarters building of the Royal College of Physicians on the site of Somerries House, at the south-east corner of Regent's Park. The architect is Denys Lasdun, 25 Dawson Place, London, W.2.

B.C. recommended to approve proposals for erection of 16 garages and provision of a rough playground, etc., at Augustus Street Nursery School site; approve repair of properties at Gloucester Avenue, Camden Street, Islip Street and Torriano Avenue, estimated cost £7,818; authorise provision of 30 pram sheds at Brookfield estate, estimated cost £2,030.

**Salford, Lancs.**—City Council recommended to approve, subject to Home Office approval, purchase, adaptation and furnishing of 192 Moor Lane, for use as a small family home. Estimated cost £3,900.

**Scarborough, Yorks.**—B.C. recommended to apply for sanction to borrow £1,350 for erection of six garages at Manham Hill and four garages at Beech Walk, East Field; to approve adaptations at 14 St. Nicholas Street into office accommodation for Water Department. Estimated cost £2,090.

**Shoreditch.**—B.C. recommended to approve conversion and improvement works at 76, 78

and 80 Nichols Square. Estimated cost £2,382.

**Sedgefield, Dur.**—T. Barrett, Sons and Partners, 33 High Bridge, Newcastle upon Tyne, have been appointed quantity surveyors by Newcastle Regional Hospital Board, for converting a former laundry into gymnasium and workshops at Winterton Hospital. The architects are Cordingley and McIntyre, Owengate, Durham City.

**Stockton-on-Tees, Dur.**—E.C. to spend £29,000 converting St. Bede's R.C. Boys' School into a primary school, and £3,260 on the erection of hutment for additional classrooms at St. Cuthbert's R.C. Mixed School; plans approved for operating theatre at Stockton and Thornaby Hospital, for Newcastle Regional Hospital Board. E. W. Chapman, architect, 125 Acklam Road, Thornaby-on-Tees; detailed plans have been approved for warehouse, office, showrooms, garage, etc., in Albion Street and Brunswick Street, for W. H. Smith and Son, Ltd., London, W.C.2; the Portrack Conservative Club are seeking a site for new club premises.

**Stromness, Orkney.**—Orkney Fishermen's Society, Ltd., 59 Alfred Street, propose to erect a processing factory. Estimated cost £11,000.

**Thornaby-on-Tees, Yorks.**—Thomas Bell and Co. (Contractors), Ltd., Frederick Street, are to erect an office block to plans by I. V. Spencer, 171 Albert Road, Middlesbrough.

**West Bromwich, Staffs.**—B.C. recommended to appoint Bond Foster and Partners, 49 Calthorpe Road, Edgbaston, Birmingham, 15, as quantity surveyors for the erection of the practical block at the George Salter School.

**Wedsbury, Staffs.**—B.C. have received town planning permission for the construction of a salvage depot in Albert Street, and are shortly inviting tenders from selected contractors for the work.

B.C. recommended to approve plans for extension to factory at Holyhead Road, for W. G. Allen, Ltd., 32 Hylton Street, Birmingham, 18; erection of car showrooms and workshop at Holyhead Road, for H. G. Lawrence; office block at Church Street, Moxley, for Frost and Sons (Moxley), Ltd., Falcon Works, Moxley; extension to factory at Holyhead Road, for Ega Electric, Ltd.

**Whickham, Dur.**—Shield Brothers, Swalwell, are seeking permission to erect offices, workshops and garages on land at Market Lane, Swalwell. Mauchline, Weightman and Elphick, architects, 12 Saville Row, Newcastle upon Tyne.

**Whitley Bay, Northumb.**—Subject to the scheme being approved by the planning authorities, it is hoped to start work this winter on a £500,000 scheme for a conference hall, flats, covered-in bus station, restaurant, modern parking facilities, and a subway to the Links. The promoters are Rosspark (Links), Ltd., whose managing director is Walter Glynn, 2 Rossway, Monkseaton.

**Woolwich.**—B.C. recommended to authorise Borough Engineer to proceed with modernisation of the large swimming bath at Woolwich Baths. Estimated cost £15,000.

**Worcester.**—City Council recommended to approve the siting of the abattoir on the present Croft Road coach station.

**Worcester.**—Working drawings are being prepared for rebuilding the White Hart Inn at College Street, for Flower and Sons, Ltd., Stratford-upon-Avon. H. Rowe and Son, 38 Foregate Street, are the architects for the scheme. Estimated cost £9,500.

#### ELECTRICAL

**Oxford.**—City Council recommended to approve plans for the completion of the electrification of the Swindon Waterworks. Estimated cost £3,936.

#### FENCING

**Lewisham.**—B.C. has approved replacement of existing fence at Heath Lane with Winslot concrete fencing. Estimated cost £280.

#### GAS AND WATER SUPPLY

**Belford, Northumb.**—A scheme is being prepared for water supplies for Seahouses and North Sunderland, for the R.D.C. Waterhouse and Routhwaite, consulting engineers, 165 Westmorland Road, Newcastle upon Tyne.

**Cardiff.**—City Council recommended to invite tenders in due course for the construction of a reservoir at Cefn Mably to store supplies from the Llandegfenn Reservoir.

**Cornwall.**—West Cornwall Water Board have approved for submission to Ministry, for approval, scheme for the total replacement of the trunk mains in Hayle and the building of a 150,000-gallon reservoir on the Towans. Estimated cost £63,000.

**Ipswich, Suffolk.**—B.C. have approved scheme for the provision of water-softening plant in the Henley Road area. Estimated cost £230,000.

**Loughborough, Leics.**—B.C. recommended to apply for sanction to borrow £7,500 for the completion of the 12in. water main from Blackbrook reservoir to Shepshed.

**Manchester.**—Housing Committee have approved proposals for water supply to housing development at Councillor Lane, Cheadle overspill site.

**North Walsham, Norfolk.**—C.C. recommended to approve in principle for grant aid R.D.C.'s supplementary bulk water supply scheme. Estimated cost £9,000.

**Norwich.**—City Council recommended to appoint T. and C. Hawksley, consulting engineers, 1 Great Scotland Yard, Whitehall, S.W.1, to report on what works should be carried out in order to meet the future demands for water likely to be imposed upon the undertaking.

**Oxford.**—City Council recommended to approve the provision of a new 6in. main to connect two existing mains at Hensington Lane, Kidlington. Estimated cost £3,260.

#### HEATING AND VENTILATING

**Iford, Essex.**—B.C. recommended to appoint Wingfield-Bowles and Partners, 32 Old Queen Street, London, S.W.1, as heating consultants for multi-storey flats to be erected at Oaks Lane and The Glade.

#### HOUSING SCHEMES

**Banbridge, Down.**—Ministry have approved erection of 76 houses at Edenberry Park, for D.U.C.

**Braughton, Herts.**—R.D.C. are to purchase land abutting Garden and Paddock Roads, Buntingford, as site for the erection of old peoples' bungalows.

**Bromley, Kent.**—B.C. recommended to invite tenders in due course for the erection of 27 old people's flats at northern side of Crown Lane.

**Chatham, Kent.**—B.C. recommended to submit to C.C. for approval, scheme for seven old people's bungalows at junction of Yarrow Road/Speedwell Avenue.

**Chichester, Sussex.**—City Council recommended to approve plans for the erection of three pairs of police houses and four garages at Parklands, for C.C.

**Colchester, Essex.**—B.C. have approved plans for residential development at St. Johns Road, for C. H. Chaston, Ltd., Holland Main Road, Holland-on-Sea, Essex.

**Croydon, Surrey.**—B.C. recommended to grant planning permission, subject to conditions, for 34 flats and 29 garages on sites of 3-11 Mowbray Road, Upper Norwood, for Tamworth Park Construction Co., Ltd., 2 Thrile Road, Streatham, London, S.W.16; 66 flats and 30 garages at 62-70 Addiscombe Road and 1 Radcliffe Road, Shirley, for Lawdon Developments, Ltd., 157 Victoria Street, London, S.W.1; maisonettes or flats and garages at 10-126 Church Road, Upper Norwood, for Land and Site Developments, Ltd., 43 Upper Berkeley Street, London W.1.

**Doncaster, Yorks.**—B.C. recommended to approve layout plan of proposed development of land on the Cantley estate, stage VB, for sale for private housing development; Borough Architect recommended to invite tenders from selected contractors for erection of 11-storey flats in the Central Area; to approve sites for five aged persons' bungalows at the Short Road and Abercorn Road triangle, Intake estate, and for nine bungalows adjacent to the Highbury Avenue and Bowleaze Gardens junction, Cantley estate.

**Fleetwood, Lancs.**—B.C. recommended to approve scheme for erection of 16 aged persons' dwellings, four shops and 10 garages at the junction of Heathfield Road, Homestead Drive, Radcliffe Road.

**Grantham, Lincs.**—B.C. recommended to invite tenders for the erection of 33 bungalows and 60 houses at Earlsfield estate, housing site 10, scheme 57.

**Hove, Sussex.**—Tenders to be invited in the near future for the erection of an extensive block of flats on site of the Kingsway Hotel, for Kingsway Court (Hove), Ltd., Morgan and Carn, 12 Grand Avenue, Hove, and Theo. H. Birks, 38 Portland Place, London, W.1, are the architects for the scheme. Estimated cost £750,000.

**Lewisham, Staffs.**—B.C. recommended to develop a site at Sydenham Park Road, Sydenham Park and Longfield Crescent by erection of 76 maisonettes, 37 flats, 24 houses and 25 garages.

**Loughborough, Leics.**—B.C. recommended to prepare plans and apply to Ministry for permission to erect 10 houses at Hatheron.

**Manchester.**—Housing Committee to submit for planning approval proposals for erection of 503 dwellings, including one 12-storey block comprising 46 flats, at Sale overspill site.

**Rowley Regis, Staffs.**—B.C. recommended to approve layout plan for six houses fronting

Dudley Road, Blackberry Lane estate, and 19 garages at the rear.

**St. Marylebone.**—B.C. recommended to appoint H. M. Miller, F.R.I.C.S., as the quantity surveyor for the Freshwater Place housing scheme. The architects are Arthur Kenyon, Tautu and Partners, 140 Park Lane, London, W.1.

**Sheffield.**—City Council recommended to approve preliminary layout plan for erection of approximately 50 one-bedroom dwellings on land off Maltravers Road, Wybourn estate, together with the allocation of a site for proposed church hall.

**Southwold, Suffolk.**—B.C. recommended, subject to planning permission, to prepare bills of quantities and in due course invite tenders for the erection of a block of four single-bedroom and two double-bedroom flats at junction of Cawley Road and Hotson Road.

**Wednesbury, Staffs.**—B.C. have applied for town planning permission for the layout of the Cross Street clearance area.

#### PLAYING FIELDS, PARKS, ETC.

**Bermondsey.**—B.C. recommended to approve a revised scheme for improvement of junction of Tooley Street and Fair Street, to include provision of raised flower bed and grass area. Estimated cost £1,586.

**Camberwell.**—B.C. preparing plans for first stage of proposed extension of Brenchley Gardens open space, in connection with abandoned railway land between Forest Hill Road and Kelvington Road. Estimated cost £3,300.

**Loughborough, Leics.**—B.C. recommended to apply for sanction to borrow £8,000 for the first stage of development of the Derby Road aerodrome site as playing fields.

**Newtownabbey, Antrim.**—U.D.C. have decided to buy 72 acres of land in the centre of the town for development as playing fields.

**Portsoy, Banffs.**—B.C. propose to lay out a nine-hole golf course. Estimated cost £5,000.

#### ROADS, BRIDGES AND SITE WORKS

**Basingstoke, Hants.**—B.C. recommended to negotiate with Goodall, Barnard and Clayton, Ltd., for the construction of roads and sewers at South Ham housing site, 34th instalment; approve plans for making-up of Crossborough Hill.

**Blackburn, Lancs.**—B.C. recommended to approve scheme for improvement of Burnley Road at its junction with Accrington Road for submission to the M.T., estimated cost £28,250; to approve resurfacing of roads and footpaths within Montague Street redevelopment area, £23,750.

**Bristol.**—City Council recommended to approve revised scheme for the improvement of Wyke Beck Road and Passage Road, from the City boundary at Brenty to the junction of Passage Road and Charlton Road. Estimated cost £177,256.

**Ceiriog, Denbighs.**—R.D.C. have approved plan to develop land in front of Maes-y-Llan housing estate as a car park.

**Chelmsford, Essex.**—B.C. recommended to approve plans for the making-up of Langdale Gardens and Van Dieman's Lane; submit to M.T. and C.C. for approval plans for the improvement of Tindal Square. Estimated cost £4,350.

**Colne, Lancs.**—B.C. recommended to apply for sanction to borrow £3,000 for completing roadworks in St. Stephens Way, Oak Street and Venables Avenue, from Byron Road to north side of Oak Street.

**Croydon, Surrey.**—B.C. recommended to approve scheme for widening of Lower Addiscombe Road. Estimated cost £9,800.

**Doncaster, Yorks.**—B.C. recommended to apply for sanction to borrow £42,000 for reconstruction of Bawtry Road, between Cantley Lane and Alston Road; £4,150 for construction of roads and sewers relating to site for aged persons' bungalows, Weston Road.

**Dudley, Warks.**—B.C. recommended to authorise the Borough Engineer to proceed with the preparation of tender documents for the improvement of St. Peter's Road; approve scheme for improvement of Simms Lane, St. Andrew's Street and Abberley Street. Estimated cost £1,090, £950 and £800, respectively.

**Ealing, Middx.**—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for widening a further section of Ruislip Road, from Cuckoo Avenue to Argyle Road. Estimated cost £55,000.

**Eastbourne, Sussex.**—M.T. recommended to approve the construction of a footpath at Pevensey Bay Road, between the roundabout island and King's Caravan Park; the improvement of the western junction of Bedfordwell Road and Upper Avenue and the western side of Upper Avenue, for B.C. Estimated cost £2,820, £2,278 and £5,875, respectively.

**Grantham, Lincs.**—B.C. recommended to negotiate a tender with G. Wimpey and Co. Ltd., for the construction of the third phase of roads and sewers at Earlsfield estate.

**Guildford, Surrey.**—B.C. recommended to approve scheme for extending the York Road car park.

**Hendon, Middx.**—C.C. recommended to approve, subject to grant aid, B.C.'s scheme for widening North End Road, by Manor House Hospital. Estimated cost £19,510.

**Hereford.**—City Council recommended to submit to M.T. for approval scheme for improvement of Canon Pyon Road, estimated cost £3,350; prepare plans for the provision of a roundabout at Ross Road/Hillside junction.

**Ilford, Essex.**—B.C. recommended to prepare plans for the making-up of Moorland Road (part); approve scheme for the improvement of Hainault Road. Estimated cost £69,698.

**Kensington.**—B.C. recommended to approve, subject to a Government grant, the widening of Earls Court Road from near the Underground railway station to Penywn Road. Estimated cost £9,870.

**Leeds.**—City Council recommended to approve scheme for re-siting of crossings, levelling and seeding verge, and laying of a kerb to central reservation on the incoming carriageway in Harrogate Road, from City boundary to Nursery Lane. Estimated cost £4,170.

City Council recommended to apply for sanction to borrow £19,130 for construction of roads and sewers on the Wykebridge estate.

**Lewisham.**—B.C. recommended to carry out improvements to Kirkdale at the junction of Jews Walk, and at Burnt Ash Hill and Burnt Ash Road in the vicinity of Lee Station. Estimated cost £1,820 and £9,500, respectively.

**Liverpool.**—City Council recommended to apply for sanction to borrow £12,899 for reconstruction of carriageway in Rumney Road West (Fonthill Road to Melrose Road); reconstruction of carriageway and footways in Woolton Hill Road (Blackwood Avenue to Woodview Road); and the proportion of the expenditure to be borne by the Highways and Planning Committee in connection with the reconstruction, following the abandonment of tramway tracks, of carriageways and footways in Sleepers Hill (Anfield Road to Walton Brock Road) and Anfield Road (Walton Lane to Sleepers Hill).

City Engineer to be authorised to carry out road improvement works in Croxteth Hall Lane, between Carr Lane East and Oak Lane, and in Stonebridge Lane, between Storrington Avenue and Carr Lane East, including construction in permanent form of temporary splitter island in the mouth of Carr Lane East, subject to M.T. approval. Estimated cost £46,166.

**Loughborough, Leics.**—B.C. recommended to prepare scheme for improvement of South Street.

**Maidenhead, Berks.**—B.C. recommended to prepare detailed scheme for the improvement of Marlow Road.

**Manchester.**—City Council recommended to apply for sanction to borrow £11,900 for construction of access road and installation of weighbridge at Hooper Street, and £10,760 for extension of Glebelands Road, Baguley Hall, and extension of Floatshall Road to connect with Southmoor Road.

**Norfolk.**—C.C. have approved scheme to purchase a stretch of the old Midland and Great Northern Railway Line and construction of by-pass over site for Fakenham. Estimated cost £40,000.

**Plymouth.**—City Council recommended to approve plans for making-up of Old Farm Way.

**Rowley Regis, Staffs.**—B.C. have submitted to M.T. and C.C. for approval revised plans for the reconstruction of City Road and rebuilding of the canal bridge. Estimated cost £41,751.

**St. Albans, Herts.**—City Council recommended to prepare layout for the construction of a temporary car park at Nursery School site. Estimated cost £1,700.

**St. Marylebone.**—B.C. have received approval in principle of the L.C.C. for a scheme to widen Edgware Road between Bryanton Street and Marble Arch and to construct a pedestrian subway under Edgware Road at the junction with Oxford Street to link-up with proposed subway under Bayswater Road.

**Salford, Lancs.**—City Council recommended to apply for sanction to borrow £7,426 for additional site works on Southgarth housing estate.

**Worcester.**—City Council recommended to approve in principle, stage 2 of scheme for widening of Bridport, estimated cost £9,600; widening part of Tolladine Road, £8,100; reinstatement of the site of the old Trinity Omnibus Station for parking purposes, £1,000; plans for improvement at the junction of New Road and Bromwich Road and enlargement of the traffic island and future widening of Gregory Mill Street at its junction with Melbourne Street.

#### SEWERAGE, SEWAGE AND REFUSE DISPOSAL

**Daventry, Northants.**—B.C. recommended to prepare scheme for extensions to sewage disposal works and the sewerage system.

**Liverpool.**—City Council recommended to apply for sanction to borrow £8,430 for reconstruction of sewers in Hardy Street, between Upper Pitt Street and Great George Street, Grenville Street South, Bow Street, Hanley Street and Disley Street, and the provision of a new manhole in Back Beau Street.

**Norwich.**—City Council recommended to apply for sanction to borrow £120,000 for the installation of a sludge digestion plant at the new sewage disposal works.

#### STREET LIGHTING

**Hampstead.**—B.C. recommended, subject to loan sanction, to approve proposals for street lighting improvements to remainder of classified roads in the borough. Estimated cost £23,500.

**Nottingham.**—City Council recommended to approve scheme for the provision of improved street lighting for all adopted roads on the northern side of Sneinton Dale, between Windmill Lane and Edale Road. Estimated cost £1,890.

#### CONTRACTS

*Full details of the Contracts marked \* will be found in our Advertisement Columns.*

#### BUILDING AND DECORATING

(See also Housing Schemes)

**Aberdare, Glam.**—Painting sections of the Aberaman Bridge, for U.D.C. Documents from the Engineer and Surveyor, Vestry Hall, Aberdare. Tenders by July 26.

**Amphill, Beds.**—Following, for R.D.C.:—  
(1) Proposed conversion of The Anchor public-house into a three-bedroom cottage and erection of one pair of single-bedroom bungalows at George Street, Maulden; (2) proposed 22 single-bedroom bungalows at Dengerth estate, Steppingley Road, Flitwick. Applications to the Engineer and Surveyor, The Limes, 12 Dunstable Street, Ampthill, Bedford, by July 25. Deposit £2 2s.

**Atcham, Salop.**—Improvements to 6-23 Weir Cottages, Hanwood (including drainage works incidental thereto), for R.D.C. Documents from the Engineer and Surveyor, 24 St. John's Hill, Shrewsbury. Tenders by Aug. 5.

**Ashford, Kent.**—Erection of three shops with maisonettes over at Faversham Road, Kentington, together with service road and site works, for U.D.C. Applications to the Surveyor, 1 Elwick Road, Ashford, Kent, by July 26. Tenders by Aug. 26.

**Bristol.**—Adaptation of former North Street School buildings to a coroner's court and mortuary, for City Council. Applications to City Architect, City Council Offices, Bristol, by July 25.

**Bristol.**—Adaptation of former North Street School buildings to a coroner's court and mortuary, for City Council. Applications to the City Architect, the Council House, Bristol, 1, by July 25.

**Bristol.**—Plastering walls of kitchens in certain pre-war Council dwellings, including incidental work to existing gas, water and electrical services, for City Council. Apply in writing, to the Housing Manager, the Council House, Bristol, 1, by 10 a.m., July 25.

**Caernarvonshire.**—Alterations to provide for school meals kitchen, Four Crosses Primary School, for C.C. Documents from the County Architect, County Offices, Caernarvon. Tenders by July 30.

**Cannock, Staffs.**—External repainting to 91 dwellings, Essington, for R.D.C. The work comprises two sites as follows:—(1) 38 dwellings, Hill Street site, Essington; (2) 53 dwellings, Brownshore Lane site, Essington. Applications to the Engineer and Surveyor, Council Offices, Penkridge, Stafford. Tenders by Aug. 3.

**Carmarthen.**—Erection of a new office block in the centre of Carmarthen, having a cubic capacity of 62,000 cu. ft., arranged on four floors and being of reinforced concrete frame construction. Work on site to commence in Aug., 1960, and be complete by May, 1961. Applications to company architect, Davies Agricultural Services, Ltd., Burton Chambers, King Street, Carmarthen. Deposit £2 2s.

**Cork, Eire.**—Extensions and alterations to St. Colman's College, Fermoy, Co. Cork, for the Very Rev. John Rea, president. Documents from Chevalier Patrick J. Sheahan, architect, 47 O'Connell Street, Limerick. Deposit £25. Tenders by Aug. 12.

**Coventry.**—Erection of a three-storey shop in Market Way, for City Council, comprising steel frames with precast concrete floors. Applications to City Architect, Council House, Coventry, by July 18. Deposit £2 2s., payable to Coventry Corporation. Tenders by Sept. 1.

**Daventry, Northants.**—Erection of a block of nine Marley concrete garages with tarmac access road and apron at Bucknells Lane, Crick, for R.D.C. Documents from H. Bonsor, surveyor, Council Offices, Church Walk, Daventry. Deposit £3 3s. Tenders by Aug. 8.

**Deal, Kent.**—Modernisation of a block of 12 almshouses at Beach Street, for the Trustees. Documents from the Architect, 24 Tufton Street, Ashford, Kent. Tenders by Aug. 6.

**Depwade, Norfolk.**—Works of improvement and incidental repairs to 12 pre-war houses at Mill Road, Fornett, for R.D.C., including the provision of bathrooms, w.c.'s, etc., and the laying of some 570yd. of salt glazed sewers with manholes. Documents from the Engineer, Council Depot, Long Stratton, Norwich. Deposit £3. Tenders by Aug. 2.

**Derbyshire.**—Glossop The Royle School, first instalment, for C.C., consisting of site works and services for Derwent prefabricated building erected by the makers to provide hall, kitchen, etc. Documents from the County Architect, County Offices, Matlock. Deposit £2 2s. (cheques payable to C.C.). Tenders by Aug. 12.

**Douglas, I. of M.**—Installation of tiled fireplaces in Corporation houses on various housing estates, approximately 576 fireplaces, under eight contracts, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Douglas. Deposit £2 2s. Tenders by Aug. 18.

**Dublin, Eire.**—Erection of a new assembly hall, at the Girls' and Infants' School, Clogher Road. Documents from Austin F. Reddy, quantity surveyor, 22 Upper Pembroke Street, Dublin. Deposit £5. Tenders by July 29.

**Dundee, Angus.**—Following, for Corporation Water Department: Brick, concrete and joiner work for the new chlorine house, approx. 22ft. by 18ft., to be constructed at Clatto Reservoir, Strathmartine, near Dundee. Documents from the Engineer and Manager, 1 Shore Terrace, Dundee. Tenders by Aug. 1.

**Durham.**—Following, for C.C.: Barnard Castle C.E. (Controlled) School—provision of false ceilings; Bishop Auckland King James I Grammar School—renewal of gymnasium floor; Bishop Auckland St. Anne's C.E. (Controlled School)—improvements to sanitation; Blackhall Colliery County School—provision of storage shed for p.e. equipment; Burnopfield R.C. (Aided) School—provision of additional playground; East Howle County School—renewal of wood floors; Gainford C.E. (Controlled) School—improvements to sanitation; Langley Park Modern School—improvements to access roadway; Newbottle County School—renewal of wood floors; New Penshaw County School—improvements to ventilation; Ramshaw County School—reinstatement of w.i. railings; Shield Row Modern Schools—renewal of electrical installation; Shirey Row Modern School—renewal of wood floors; Spennymoor New Dental Clinic—electrical installation. Applications to County Architect, South Street, Durham, by July 27.

**East Suffolk.**—Erection of farm buildings at Western Barn Farm, Corton, near Lowestoft, for C.C. Documents from the County Land Agent and Valuer, County Hall, Ipswich. Deposit £2. Tenders by Aug. 2.

**Edinburgh.**—Construction of mass concrete wall, surmounted by iron railing fence, at Marine Gardens industrial area, for City Council. Works comprise approximately 1,000 lin. yd. of 4ft. high mass concrete wall and approximately 1,000 lin. yd. of 4ft. 6in. high solid iron railing fence. Documents from the City Engineer's Department, 329 High Street, Edinburgh. Tenders by Aug. 1.

**Essex.**—Following, for C.C.: (1) Harold Wood Redden Court Secondary School extensions, including the erection of classroom, science laboratory and art and craft room at first-floor level in traditional construction, estimated cost £11,950; (2) Hostel for Elderly Persons, Basildon, in traditional construction, estimated cost £67,000. Separate applications to H. Conolly, county architect, County Hall, Chelmsford, by July 23.

**Holland.**—Provision of a welfare foods room at the Spalding Clinic, for C.C. Documents from the County Architect, County Hall, Boston, Lincs. Tenders by July 29.

**Huntingdon.**—Structural repairs and external painting at Montagu House, for R.D.C. Documents from the Surveyor, Montagu House, Huntingdon. Tenders by Aug. 11.

**Lancashire.**—Conversion of existing hall and scullery to form new kitchen and dining-room at Colne Sacred Heart R.C. School, for C.C. Work consists of sundry alterations

in various trades but will be let as one contract. Applications to the County Architect, P.O. Box 26, County Hall, Preston, by July 25.

**Letchworth, Herts.**—Painting and decorations, both externally and internally, of buildings and equipment situated in various parts of the district, and in one case outside the district, for U.D.C. Documents from E. L. Johnson, engineer and surveyor, Council House, Letchworth. Deposit £2 2s. Tenders by Aug. 4.

**Llanidloes, Montgomeryshire.**—Erection of a community centre on a site adjoining Mount Street and New Street, for B.C. Documents from H. A. Jones, town clerk, Town Hall, Llanidloes. Deposit £2 2s. Tenders by Aug. 10.

**Manchester.**—Erection of bowls pavilion at Philips Park, Bradford, for City Council. Documents from the City Architect, P.O. Box 488, Town Hall, Manchester. Tenders by Aug. 10.

**Manchester.**—Complete overhaul of slated roof at the High School of Art, Southall Street, for City Council. Documents from the City Architect, P.O. Box 488, Town Hall. Tenders by July 29.

**Northampton.**—External repairs and renovations to schools, for Education Committee: (Contract 1) Barry Schools, including classroom blocks between Barry Road and Lutterworth Road; (2) Kingsthorpe Grove Schools. Documents from the Borough Architect, Guildhall, Northampton. Tenders by Aug. 5.

**Northern Ireland.**—(a) Building work; (b) mechanical engineering services; (c) electrical engineering services in connection with a new two-storey 65-bed ward unit at Musgrave Park Hospital, for the Northern Ireland Hospitals Authority. Applications, stating clearly for which item firms wish to tender, to the Secretary, Northern Ireland Hospitals Authority, 27 Adelaide Street, Belfast, by 5 p.m., July 23.

**Oswaldtwistle, Lancs.**—External repainting of the Town Hall, for U.D.C. Documents from J. R. Johnston, engineer and surveyor, Town Hall, Union Road, Oswaldtwistle. Tenders by Aug. 3.

**Oxfordshire.**—Alterations and additions to the South Oxfordshire Technical College situated off Gravel Hill, Henley, for C.C. The work consists of internal alterations, demolition of out-buildings and the construction of a new boiler house. Applications to Julian Leathart and Son, Mount Lodge, Sunningdale, Berks, by July 25.

**Plympton Devon.**—Construction of a lorry washing bay at Plympton Market, for the Plympton Cattle Market (1909), Ltd., Devon. Documents from the Secretary of the Company at Hill House, Ridgeway, Plympton. Tenders by July 30.

**Rothwell, Yorks.**—Erection of a prefabricated branch library, 30ft. by 18ft. 6in., at the end of Carlton Lane, Loftus. Documents from the Building Superintendent, Civic Buildings, Rothwell. Deposit £2 2s. Tenders by July 27.

**Slaidburn, Yorks.**—Supply and erection at the Hodder Works, Slaidburn, of the following, for Fylde Water Board: (a) superstructure, and (b) patent aluminium roof decking. Documents from the Engineer, Fylde Water Board, Sefton Street, Blackpool. Tenders by Aug. 2.

**Southwell, Notts.**—Construction of public conveniences at Hoveringham, for R.D.C. Documents from the Architect and Surveyor, Council Offices, Westgate, Southwell. Tenders by Aug. 2.

**Standish-with-Langtree, Lancs.**—Exterior pointing of the following, for U.D.C.: (1) 57 houses, Fairhurst Avenue estate; (2) 40 houses Almond Brook Road estate (scheme 1). Documents from H. Knowles, surveyor and water engineer, Ashfield House, Standish. Tenders by Aug. 8.

**Stanley, Yorks.**—Following works, for U.D.C.: (1) Miscellaneous roof and wall painting at the Moor House estate, Stanley; (2) erection of a brick-built lock-up on the Sunny Hill estate, Kirkhamgate. Details from D. Walker, public health inspector, Council Offices, Coach Road, Outwood, Wakefield. Tenders by July 29.

**Stratford-on-Avon, War.**—New library and administrative block, Henley Street, for Shakespeare's Birthplace Trustees and Guardians. Apply by July 30. Tenders by Oct. 5.

**Swatragh, Londonderry.**—Erection of voluntary primary school at Swatragh, for the Rev. P. J. Monagle. Documents from P. J. Davidson, quantity surveyor, 16 High Street, Belfast. Deposit £7 7s. Plans seen at the offices of the quantity surveyor or M. A. Fitzpatrick, architect and surveyor, 16-18 Strand Road, Londonderry. Tenders by Aug. 9.

**Theftord, Norfolk.**—Exterior painting of 98 houses at Newtown, Nelson Crescent, and St. Margaret's Crescent, for B.C. Documents from the Borough Surveyor, Municipal Offices, Thetford. Tenders by July 26.

**Truro, Corn.**—Painting of 37 street lamp standards in two groups, for City Council. Documents from the City Engineer and Surveyor, Town Hall, Truro. Tenders by Aug. 2.

**Watford, Herts.**—External painting to 285 Council houses and flats at Abbots Langley, Radlett and Oxhey, and 12 garages at Oxhey, for R.D.C. Documents from the Engineer and Surveyor's Department, 99 Langley Road, Watford. Tenders by July 27.

**West Riding.**—Renewal of urinals and w.c. pans at Castle Hill J.M.I. School, for C.C. Documents from E. Aitken-Davies, divisional education officer, Education Office, Todmorden. Tenders by July 29.

**West Riding.**—Repairs to boundary wall and pointing to laundry in random areas at Northgate Lodge, Pontefract, for C.C. Applications to the Divisional Architect, Bishopsgarth, Westfield Road, Wakefield, by July 25. Tenders by Aug. 22.

**West Riding.**—Reorganisation of the Hampsthwaite School meals kitchen (building contractors only), for C.C. Applications to the Divisional Architect, Salisbury Buildings, Albert Street, Harrogate, by July 25. Tenders by Aug. 8.

**West Riding.**—Formation of a scullery within the existing cloakroom at Darfield C.E. (Controlled) School, for C.C. Applications to the Divisional Architect, Planet Road, Ardwick-le-Street, near Doncaster, by July 26. Tenders by Aug. 26.

**West Riding.**—External painting and internal renovations at the County Hall, Wakefield, for C.C. Applications to the Divisional Architect, Bishopsgarth, Westfield Road, Wakefield, by July 29. Tenders by Aug. 22.

**West Riding.**—Internal renovation of the Divisional Police Headquarters and court house, Moorgate, Rotherham, for C.C. Applications to the Divisional Architect, Planet Road, Ardwick-le-Street, near Doncaster, by July 26. Tenders by Aug. 26.

**West Sussex.**—Following for C.C.: Remodelling of (a) Coldwaltham C.E. (Controlled) School, near Pulborough (job No. 5940); (b) Hollycombe Primary School, near Liss (job No. 5944). Applications to the County Architect, County Hall, Chichester, by July 25.

**Whitchurch, Salop.**—Provision and erection of one block of 20 precast concrete garages on a prepared site at Smallbrook housing estate, for U.D.C. Documents from the Engineer and Surveyor, Pauls Moss, Dodington, Whitchurch. Tenders by Aug. 4.

**Woodbridge, Suffolk.**—Additions to 45 Edwin Avenue, for U.D.C. Documents from the Surveyor to the Council, Eden Lodge, Woodbridge. Tenders by July 28.

**York.**—Repainting of approximately 500 street name boards in the city, for City Council. Documents from Chas. J. Minter, city engineer, surveyor and planning officer, 7 St. Leonard's Place, York. Deposit £1. cheque crossed and payable to York Corporation. Tenders by July 27.

**York.**—Improvements to sanitary annexes at Clifton Hospital, for the Leeds Regional Hospital Board. Applications to the Architect to the Board, Park Parade, Harrogate, by noon, July 27. Deposit £2 2s., cheques payable to the Leeds Regional Hospital Board and crossed. Plans seen at the office of Brierley, Leckenby and Keighley, architects, 10 Lendal, York.

**York.**—Modernisation of the recreation hall at Clifton Hospital, York, for Leeds Regional Hospital Board. Applications to the Architect to the Board, Park Parade, Harrogate, by July 27. Deposit £2 2s., cheques payable to the Board. Plans seen at the offices of Brierley, Leckenby and Keighley, chartered architects, 10 Lendal, York.

#### CLOTHING AND TEXTILES

**Glasgow.**—Supply of the following cloth required for uniforms for employees in various departments, for City Council:—T.22, 2,200yd.; T.104, 60yd.; T.65 blue, 5,460yd.; T.67, blue, 4,000yd.; T.71A blue, 11,000yd.; fire brigade serge (Glasgow), 1,200yd.; Manchester serge A, 400yd.; 1.S.441, 1,600yd.; white poplin shirting, 2,850yd.; blue-grey shirting, 21,600yd. Documents from the Town Clerk, City Chambers (Room 44), Glasgow. Tenders by Aug. 1.

**Paisley, Renfrews.**—Supply of Fire Brigade uniform and equipment, including tunics, trousers, greatcoats, shirts, socks, rubber boots, shoes, helmets, etc., for the Western Fire Area Joint Committee. Documents from the Firemaster, 12 Johnston Street, Paisley. Tenders by Aug. 22.

**Stockport, Ches.**—Supply of overalls, boiler suits and plastic suits to cleansing department, for B.C. Documents from Cleansing Superintendent, Booth Street Depot, Stockport. Tenders by July 30.

#### DEMOLITION

**Smethwick, Staffs.**—Phase 1, redevelopment site 3, demolition of 84 houses, for B.C. Written applications to the Borough Engineer and Surveyor, Council House, Smethwick. Deposit £2 2s., cheque payable to "Borough Treasurer, Smethwick."

**Staffordshire.**—Demolition of two pairs of semi-detached properties adjacent to the Rugeley-Lichfield Road, A51, at Brereton Road, Rugeley, for C.C. Documents from the Clerk, County Buildings, Stafford. Tenders by July 31.

**Wrexham, Denbighs.**—Demolition of approximately 50 dwellings together with site clearance, Rhos, for R.D.C. Documents from the Engineer and Surveyor, Imperial Buildings, Regent Street, Wrexham. Tenders by July 27.

#### ELECTRICAL

**Birmingham.**—Installation of electric lighting and power in shops and maisonettes (stages 3 and 4), Kents Moat estate, contract 675, for City Council. Plans seen at the Mechanical and Public Lighting Department, 38 Cambridge Street, Birmingham, I. Documents from the office of Sir Herbert J. Manzoni, city engineer and surveyor, Civic Centre, Birmingham, I. Deposit £2 2s., cheques payable to Sir Herbert J. Manzoni. Tenders by July 26.

**Birmingham.**—Inspection and maintenance of electric passenger lifts which have been installed by various lift manufacturers at multi-storey flats estates for the period Sept. 1, 1960, to Sept. 31, 1961, for City Council. Applications, in writing, to J. P. Macey, housing manager, Housing Management Department, Bush House, Broad Street, Birmingham, I. Tenders by Aug. 15.

**Hull.**—Electrical installation at a factory and office building on the north side of Hedon Road, for City Council. The installation consists of 416 lighting points controlled by 153 switches, 81 switch socket outlets, sanitary incinerators, water heaters, shaver supply unit, battery charger outlet and 41 three-phase outlets. The successful contractor is required to commence the works within four weeks from receipt of instructions and to complete the works within the following 12 weeks. Documents from H. F. Alston, town planning officer, Guildhall, Hull. Deposit £2, payable to City Treasurer. Tenders by Aug. 3.

**North Shields, Northumb.**—Electrical rewiring of two wards at Preston Hospital. Documents from the Superintendent Engineer, Preston Hospital, North Shields. Tenders by Aug. 20.

**Stonehouse, Lanarks.**—Following work at Stonehouse Hospital, for the Board of Management for Motherwell, Hamilton and District Hospitals: (a) Electrical work, wards 7 and 8; (b) heating work, wards 7 and 8; (c) electrical work, nurses' home, phase IV; (d) heating work, nurses' home, phase IV. Documents from the Group Secretary and Treasurer, Board of Management Offices, Strathclyde Hospital, Motherwell.

**West Ham, Essex.**—Supply and installation of two four-person passenger lifts in West Ham, E.15, and Harold Wood, Essex, for B.C. Documents from Borough Engineer, West Ham Town Hall, Stratford, E.15. Tenders by July 29.

#### GAS AND WATER SUPPLY

**Armagh.**—Supply of one electrically driven submersible in-line booster unit with a capacity of approx. 100 g.p.m. at 120ft. head, for the Armagh and Dungannon Waterworks Joint Board. Documents from Munce and Kennedy, 133 University Street, Belfast, 7. Tenders by Aug. 12.

**Birkenhead, Ches.**—Protective covering with anti-corrosive tape of the supporting steel columns and bracings, etc., of Prenton high level water tank, for B.C. Tank 57ft. dia.; height approx. 42ft. above ground level. Documents from the Water Engineer's Office, 601 Borough Road, Birkenhead. Deposit £1 1s. Tenders by July 27.

**Cork, Eire.**—Supply and delivery f.o.q. Cork and erection of pumps and motors for Allow regional water supply scheme, for C.C. The plant shall consist of (1) two electric pumping sets, each consisting of a centrifugal pump and electric motor, each set being capable of delivering 300 gallons of water per minute, and (2) two electric pumping sets, each consisting of a centrifugal pump and electric motor (each set of pumps shall be capable of delivering 300 gallons of water per minute through an 8in. cast-iron main); 380-volt, three-phase, a.c. electric power will be available at the site. Documents from the

Secretary, Cork County Council, Annabella, Mallow. Deposit £2 2s. Tenders by Aug. 27.

**Cork, Eire.**—Supply and delivery f.o.r. Freemount, Co. Cork, and erection of equipment for the chemical dosing, rapid gravity filtration and sterilisation of the Allow regional water supply, for C.C. Documents from the Secretary, Cork County Council, Annabella, Mallow. Deposit £2 2s. Tenders by Aug. 27.

**Cork, Eire.**—Allow regional water supply scheme, for C.C., including the construction of intake, filter and pumphouse and service reservoirs and the laying of rising main, trunk mains and distribution mains. The approximate lengths of a.c., c.i. and/or p.v.c. mains to be laid are as follows:—247 lin. yd. of 9in. pipe; 7,458 lin. yd. of 8in. pipe; 10,900 lin. yd. of 6in. pipe; 2,742 lin. yd. of 5in. pipe; 15,486 lin. yd. 4in. pipe. Documents from the Secretary, Cork County Council, Annabella, Mallow. Deposit £50. Tenders by Aug. 27.

**Dundee, Angus.**—Supply of multi-stage electrically operated centrifugal pumps, together with accessories, switchgear, etc., and for the erection and installation in the pumphouse, at Menzieshill, for Water Department. Applications, in writing, to the Engineer and Manager, Dundee Corporation Water Department, 1 Shore Terrace, Dundee. Tenders by Sept. 1.

**Dungarvan, Waterford, Eire.**—Dungarvan water supply improvement scheme, for U.D.C. The work includes the construction of 200,000-gallon capacity water tower and other incidental works, together with the laying of the following pipes, including fittings: Approx. 480 lin. yd. 12in. a.c. rising main; approx. 2,203 lin. yd. 12in. a.c. service main; approx. 280 lin. yd. 10in. c.i. distribution main; approx. 877 lin. yd. 10in. c.i. distribution main; approx. 1,203 lin. yd. 6in. distribution main; approx. 6,110 lin. yd. 4in. distribution main; approx. 135 lin. yd. 3in. distribution main. Alternative tenders are required for a.c., c.i. and p.v.c. pipes for the 6in., 4in. and 3in. distribution mains. Documents from Ed. G. Pettit, consulting engineer, 7 South Mall, Cork. Deposit £10 10s. Tenders by Aug. 31.

**Epsom and Ewell, Surrey.**—Construction of 24in. borehole, for B.C. Tenders by Aug. 6.

**Llanfeilo, Carms.**—Llanegwad and Cothi Bridge water mains extension scheme, for R.D.C., comprising the laying of approximately five miles of 3in. and 4-mile of 2in. asbestos-cement water mains, together with valves and other fittings. Documents from the Engineer and Surveyor, Council Offices, Crescent Road, Llanfeilo. Deposit £2 2s. Tenders by July 29.

**Middlesbrough, Yorks.**—Balderhead impounding reservoir for Tees Valley and Cleveland Water Board. Apply by Sept. 1.

**Omagh, Tyrone.**—Supplying and laying of approx. 1,932 lin. yd. of 2in. dia. Evertite water main from Beattie Park, Gortin Road to Coronation Cottages, Mountjoy East, for R.D.C. Documents from the Council Offices, Omagh. Deposit £2 2s. Tenders by Aug. 3.

**Port Talbot, Glam.**—Provision of approx. 3,000yd. of 8in. cast-iron pipe; 2,000yd. of 10in. cast-iron pipe, together with the construction of one pumphouse, and ancillary works at Cwmavon-Baglan-Sandfields, for B.C. Documents from G. V. Griffiths, borough engineer, Municipal Buildings, Port Talbot. Deposit £2 2s. Tenders by Aug. 15.

**Romsey and Stockbridge, Hants.**—Northern parishes water supply, stage 4, Mottisfont, contract 12, for R.D.C. Deposit £3 3s. Tenders by Aug. 19.

**Swansea.**—Construction of a valve compound enclosing the automatic valves for Cray water mains, for B.C. The works consist of the construction of a small reinforced concrete retaining wall and a random rubble stone wall with precast concrete copings. A roof of corrugated sheets on steel purlins covers the compound. Documents from the Borough Water Engineer and Manager, The Guildhall, Swansea. Tenders by July 30.

#### HEATING AND VENTILATING

**Cardiff.**—The installation of heating services at the western district pumping station, Cardiff, for City Council. Documents from the City Surveyor, City Hall, Cardiff. Deposit £2 2s. (cheques payable to Corporation). Tenders by Aug. 16.

**Croydon, Surrey.**—Conversion of two Lancashire boilers at Thornton Heath Baths from hand-fired, coal-burning, to semi-automatic oil burning, for B.C. Documents from the Baths Superintendent, Central Baths, Scarbrook Road, Croydon. Tenders by Aug. 15.

**Diss, Norfolk.**—Supply and installation of an Ideal Britannia boiler at the Corn Hall, for U.D.C. Documents from Engineer and Surveyor, Council Offices, Diss. Tenders by July 30.

**Manchester.**—Following, for City Council:—Supply and installation of central heating and boiler plant to the combined clinics at (a) Charlestown Road, (b) Plant Hill Road, Blackley. Documents from the City Architect, P.O. Box 488, Town Hall, Manchester. Tenders by July 29.

**Shannon, Eire.**—Supply and installation in the new freight terminal at Shannon Airport of the following: (a) Low-pressure hot water system; (b) domestic cold water system for drinking, sanitary and fire-fighting purposes; and (c) domestic hot water systems, including electric storage water heaters. Documents from the Department of Transport and Power, Kildare Street, Dublin. Deposit £3. Tenders by July 30.

**Swatragh, Londonderry.**—(i) Heating installation (l.p.h.w.); (ii) plumbing installation; (iii) electrical installation in the Voluntary Primary School at Swatragh, for the Rev. P. J. Monagle. Documents from M. A. Fitzpatrick, architect and surveyor, Strand Chambers, 16-18 Strand Road, Londonderry. Deposit £3 3s. each installation (cheque). Tenders by Aug. 9.

**West Riding.**—Extensions to heating installation at Dewsbury Court House and Police Station (W.R.C.C.), work to be completed by September 24, 1960, for C.C. Applications to the County Architect, Bishopsgarth, Westfield Road, Wakefield, by July 29. Tenders by Aug. 19.

#### HOUSING SCHEMES

**Andover, Hants.**—Four pairs of houses and site works at Wolversden Close, for B.C. Documents from the Borough Surveyor, Municipal Offices, Beech Hurst, Weyhill Road, Andover. Deposit £2 2s. Tenders by Aug. 15.

**Aylesbury, Bucks.**—Following housing schemes, for B.C.:—(a) Tring Road, Aylesbury—104 dwellings and some garages; (b) Tring Road, Aylesbury—26 dwellings and some garages; (c) Challoner Road, Southcourt—17 dwellings. Applications to the Town Clerk, Town Hall, Aylesbury. Deposit £3 each. Tenders by Aug. 29.

**Blith, Suffolk.**—Three blocks of old persons' dwellings, comprising 17 units and communal accommodation and including siteworks, at Fairfield Crescent, Framlingham, for R.D.C. Documents from the Housing Manager, Council Offices, Rendham Road, Saxmundham. Deposit £2 2s. Tenders by Aug. 20.

**Croydon, Surrey.**—Fourth stage redevelopment of the Shrublands housing estate, comprising the erection of 242 dwellings in two-, three- and four-storey blocks, for B.C. Send names to the Borough Engineer, Municipal Buildings, Croydon. Bills of quantities to be issued on Sept. 1, 1960. Tenders by Sept. 29.

**Deben, Suffolk.**—Six dwellings at Grundisburgh, for R.D.C. Submit names to the Engineer and Surveyor, Council Offices, Melton Hill, Woodbridge. Deposit £2 2s. Tenders by Aug. 10.

**Dudley, Worcs.**—Eighteen old persons' bungalows, Eve Lane, for B.C. Applications to the Borough Architect, 5 Ednam Road, Dudley, by Aug. 1. Deposit £2 2s., cheques payable to Dudley Corporation.

**Horbury, Yorks.**—Two houses and 14 bungalows, Golden Square, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Horbury. Deposit £2 2s. crossed cheque, payable to Council. Tenders by July 30.

**Kingsclere and Whitchurch, Berks.**—Two pairs of bungalows including site and drainage works, etc., at housing site 5, Breachfield, Burghclere, for R.D.C. Documents from Henshaw and Cheek, chartered architects, Chantry House, 1 West Street, Andover. Deposit £2 2s. Tenders by Aug. 8.

**Leigh, Lancs.**—Thirty-two traditional-type houses at Siddow Common, for B.C. Documents from the Housing Director, Housing Department, Windermere Road, Leigh. Deposit £2 2s. Tenders by Aug. 8.

**Letchworth, Herts.**—A detached house and garage together with drains, services and all other ancillary works, at the Council Depot, Icknield Way East, for U.D.C. Documents from E. L. Johnson, The Council House, Letchworth. Deposit £2 2s. Tenders by Aug. 12.

**Llchwyr, Glam.**—Construction of (a) estate roads, etc., and (b) blocks of dwellings, for U.D.C. Deposit £2 2s. each. Tenders by Aug. 22.

**Londendale, Lancs.**—Twelve two-storey flats in Taylor Street, Hollingworth, near Manchester, for U.D.C. Documents from the Surveyor, Council Offices, Hollingworth, near Manchester. Deposit £3 3s. Tenders by Aug. 13.

**Mildenhall, Suffolk.**—Following works, for R.D.C.: (a) Two pairs of bungalows at Church Lane Close, Barton Mills; (b) 10 pairs of bungalows at Queens Road, Brandon; (c) roads, footpaths and sewers to form an extension of the Council's housing site at Queens Road, Brandon. Documents from the Engineer and Surveyor, Council Offices, King Street, Milden-

hall. The works will constitute three separate contracts, and contractors should state which contract they require documents for. Tenders by Aug. 12.

**Northampton.**—Four houses at Great Houghton and two bungalows at Rothersthorpe, for R.D.C. Documents from R. J. Miller, architect, 1 Cheyne Walk, Northampton. Deposit £3 3s. Tenders by July 27.

**Ploughley, Oxon.**—One pair of bungalows, The Old Green, Horton-cum-Studley, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Waverley House, Bicester. Deposit £2 2s. Tenders by July 28.

**Ploughley, Oxon.**—Twenty-six houses, roadworks and ancillary works at Park Hill estate, Kidlington, Oxon, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Waverley House, Bicester. Deposit £2. Tenders by July 28.

**St. Helens, Lancs.**—Twenty-four bungalows, in 12 pairs, built in traditional construction, sited fronting on to Houghton Road, for B.C. Documents from M. Ward, borough engineer, Town Hall, St. Helens. Deposit £2 2s. Plans seen at the Architectural Office, 5 Coatham Street, St. Helens. Tenders by Aug. 22.

**Southampton.**—Twenty-four flats and 10 maisonettes in one five-storey block at Weston Farm estate, contract B331, for B.C. Applications by July 29.

**Torrington, Devon.**—Erection of two pairs of one-bedroom bungalows at Shebbear, for R.D.C. Documents from Friend, Kelly and Friend, 102 Boutport Street, Barnstaple. Deposit £2 2s. Tenders by July 28.

**Tottenham, Middx.**—Seventy-six dwellings, for B.C. Apply by Aug. 1. Deposit £2 2s.

**Tottenham, Middx.**—Eighteen flats in four-storey blocks, for B.C. Apply by July 28. Deposit £2 2s.

**Wakefield, Yorks.**—Following, for City Council: One block of four flats at Agbrigg Road; two blocks of four flats at George-a-Green Road. Applications to the City Engineer, Town Hall, Wakefield, by July 29.

**Wales.**—Two police houses at Barnfields, Newton, for Mid-Wales Police Authority. Documents from P. E. White, clerk to the Authority, County Offices, Welshpool. Tenders by Aug. 8.

**Wandsworth.**—Sixteen two-storey houses at Clarence Avenue, Clapham, for B.C. Applications to J. Noel Martin, town clerk, Municipal Buildings, Wandsworth, S.W.18, by July 22, giving details of experience, plant and technical and supervisory staff available together with names of two technical and two financial referees.

**Waterford, Eire.**—Thirty-three rural cottages and incidental works in various locations throughout the county, for C.C. Tenders must be for full contract or for labour only. Documents from County Secretary (Housing Section), Davitt's Quay, Dungarvan, Co. Waterford. Tenders by Aug. 31.

**Wick, Caithness.**—Willowbank housing, 16th development, for B.C., including mason, carpenter, joiner and glazier, slater, plumber and drainage, plaster, painter and electrical works in connection with 92 houses. Documents from Jenkins and Marr, architects, 3 Bon-Accord Crescent, Aberdeen. Plans also seen at the office of the Burgh Surveyor, Wick. Tenders by Aug. 15.

**Winchester.**—One three-storey block of six flats in Water Lane, for City Council. Applications to A. S. Wilson and Partners, chartered quantity surveyors, 8 Storey's Gate, Westminster, S.W.1, by July 28. Deposit £2 2s., cheque payable to Corporation.

#### MATERIALS AND SUPPLIES

**Basildon, Essex.**—Supply of domestic fuel oil for the period Aug. 15, 1960, to March 31, 1961, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, 88 Town Square, Basildon. Tenders by Aug. 5.

**Halifax, Yorks.**—Supply of wooden and tubular steel furniture for the commerce section of the Percival Whitley College of Further Education, for E.C. Documents from L. T. Jackson, chief education officer, West House, Halifax. Tenders by Aug. 1.

**Luton, Beds.**—Supply of ironmongery, 40 houses, Lewsey Farm estate, for B.C. Documents from the Borough Architect, Town Hall, Luton. Tenders by Aug. 15.

**\*Manchester.**—Supply of electric lamps, for City Council. Tenders by Aug. 2.

**\*Manchester.**—Supply of paint, for Blackburn and District Hospital Management Committee. Tenders by Aug. 18.

**Muckomore, Antrim.**—Supply of specialist precast concrete work for the Pig Progeny Testing Station at Greenmount Agricultural College, for the Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, I. Tenders by Aug. 8.

**Reading, Berks.**—Erection of a caretaker's house at Southlands Secondary School for Girls, Northumberland Avenue, for B.C. Documents from Howard V. Lobb and Partners.

architects, 20 Gower Street, London, W.C.1. Tenders by July 28.

**Ulster.**—Supply of the following requirements for the 12 months commencing Oct. 1, 1960, for Transport Authority: (Contract 51) Grinding wheels, segments, etc.; (52) pistons, cylinder liners and piston rings; (53) high speed steel twist drills, taps and dies, tap wrenches, die stocks and solid hexagon die nuts; (54) fuel oil for heating; (55) iron castings (ordinary), chairs, brake blocks and fire bars; (56) joints—graphite, hard vulcanised fibre, rubber insertion, paper and laminated cork, fibre washers, etc.; (57) bedding, oat straw and feeding hay; (58) drawing office requisites; (59) wood screws; (60) high tensile bolts, nuts and set screws; (60a) permanent way fastenings; (61) machine screws and nuts; (62) transfers for carriages, omnibuses, etc.; (63) belting; (64) brake and clutch linings, bonnet tape and fan belts; (65) batteries and battery plates, etc.; (66) hinges, brass and steel; (67) vulcanising tyres; (68) hacksaw blades and bandsaw blading; (69) fire extinguishers and refills; (70) butane gas for cooking purposes; (71) aluminium (sheet); (72) canvas; (73) tinned and cotton goods; (74) patent wadding; (75) linoleum; (76) hose clips (worm drive type); (77) electrical accessories, adaptors, plugs, switches, etc.; (78) p.v.c. and cotton sleeving, and Empire cloth; (79) machinery cleaning cloths service; (80) aluminium sections; (81) sulphuric acid and hydrochloric acid; (82) glassware; (83) beer bottles and crown corks; (84) roofing felt and accessories; (85) plasterboard, insulating board and hardboard; (86) wallpaper and accessories; (87) imported and home grown softwood. Documents from the Stores Superintendent, Duncrue Street, Belfast, at a charge of 1s. for each form. Tenders by Aug. 12.

**Wem, Salop.**—Erection of four houses and two bungalows and improvements to two houses at Pickhill, Burton, for R.D.C. Documents from Hind and Brown, architects, District Bank Chambers, Hanley, Stoke-on-Trent. Deposit £2 2s. Plans seen at Architect's office or Council Offices, Wem. Tenders by July 30.

#### PLANT AND MECHANICAL TRANSPORT

**Ballyclare, Antrim.**—Supply of a new diesel Land-Rover, with long chassis and truck cab, for the Mid-Antrim Waterworks Joint Board. Specification from the Board's Office, Town Hall, Ballyclare. An allowance must be given for a 1956 Land-Rover, which has recently been approved for p.v.s. and is in excellent order. This vehicle can be inspected at any time by arrangement. Tenders by July 29.

**Congleton, Cheshire.**—Provision of a 30 cwt. trailer suitable for towing by a Fordson Dexta tractor, for B.C. The trailer to be complete with overdrive brakes, lighting and trailer plates. Further information from the office of the Borough Engineer and Surveyor, Market Place, Congleton. Tenders by July 22.

**Corby, Northants.**—Supply of a 15cwt. Bedford van (102in. wheelbase model), painted and lettered to the Council's requirements, for U.D.C. The tender must include a part-exchange allowance for a 1952 Bedford van and a Lacre sweeper. The sweeper may be inspected at the Council's Central Depot, Cotttingham Road, Corby, and the Bedford van will be available for inspection at 8 Stocks Lane, Corby, from 9 a.m. to 10 a.m. on any weekday. Documents from G. B. Blackall, clerk of the Council, Council Offices, Corby. Tenders by July 25.

**Coseley, Staffs.**—Supply of one refuse collection vehicle, for U.D.C., comprising 16-24 cu. yd. Eagle Compressmore body, fitted with crew cab and mounted on a Ford Trader 7-ton chassis with six-cylinder diesel engine. The whole vehicle to be painted and lettered to the requirements of the Council. Documents from H. Small, Transport Officer, Council House, Coseley. Tenders by Aug. 8.

**Haltemprice, Yorks.**—Supply and delivery of one 16-18 cu. yd. dual tipping refuse vehicle, for U.D.C. Documents from the Engineer and Surveyor, Anlaby House, Anlaby. Tenders by July 30.

**Hemel Hempstead, Herts.**—Following, for R.D.C.: Refuse collecting vehicle of the fore-and-aft type—(a) 16 cu. yd. nominal capacity; (b) 26 cu. yd. nominal capacity, or thereabouts, with or without auxiliary packing devices. Documents from R. H. T. Chappell, senior public health inspector, The Bury, Hemel Hempstead. Tenders by Aug. 22.

**Mountain Ash, Glam.**—Supply to Mountain Ash of the following vehicles, for U.D.C.: (1) One Commer Superpoise open motor lorry, 3-ton embodying a six-cylinder Perkins P.6 diesel engine, four-speed synchromesh gearbox, fully floating deep section frame with short wheel base, servo-assisted hydraulic brakes, 7.00 x 20, 10-ply tyres (twin rear) and spare, vertical type hydraulic tipping mechanism and steel-lined timber body, size overall 9ft. 2in. by 7ft. 1in., with drop sides 1ft. 9in. high and tail board; (2) one Karrier Gamecock 10 cu. yd. all-steel refuse collector, type 3/4

tons low loading chassis on 27in. x 6in. 10-ply heavy-duty pneumatic tyres with twin rear and spare, with three-seater cab and embodying a Roots high speed direct-injection two-stroke diesel engine, four-speed synchromesh gearbox, servo-assisted hydraulic brakes and fitted with semi-circular steel sliding dust covers, double opening rear doors, power hydraulic end tipping gear together with rear step. The tender for the vehicles must include for painting, lettering to the Council's requirements and for number plates. Tenders for these vehicles must also include a part exchange allowance for one Karrier Bantam open drop-side Tipper Lorry, registration no. KTG 738, purchased new in January, 1951, and one Karrier C.K.3 10 cu. yd. refuse collector registration No. KNY 591, purchased new in August, 1951. These lorries may be inspected by arrangement with the Council's Engineer and Surveyor. Tenders, stating delivery period in plain sealed envelopes, endorsed "Tenders for Lorries," to R. Gwynne Richards, clerk of the Council, Town Hall, Mountain Ash, by noon, July 25.

**Newcastle upon Tyne.**—Supply of five petrol-engined motor vans and four diesel-engined tipping wagons, for City Council. Specification from City Engineer, Town Hall, Newcastle upon Tyne, I. Tenders by July 27.

#### PLAYING FIELDS, PARKS, ETC.

**Belfast.**—Preparing, grading and surfacing of playing fields and surrounding areas, also the construction of tennis courts with enclosure, etc., at Our Lady of Mercy Voluntary Intermediate Girls' School, Ballysillan Road, for the Sisters of Mercy. Documents from Frank McArdle, architect, civil engineer, Brookhampton, 55 Andersonstown Road, Belfast, 11. Deposit £4 4s. (cheque). Tenders by July 29.

**Isle of Wight.**—Preparation of playing fields for the Newport Priory Secondary Girls' School, for C.C. Applications to the County Architect, County Hall, Newport, I. of W., by July 18. Deposit £2 2s., payable to Council. Tenders by Aug. 3.

**Taunton, Som.**—Ground preparation and grass seeding, etc., of several open areas adjoining properties on the Priorswood housing estate, amounting in all to approx. 7,500 sq. yd. for B.C. Documents from C. Bacon, borough architect, Flood House, Station Road, Taunton, Tenders by July 26.

**Westhoughton, Lancs.**—Construction and laying out of approximately 10 acres of public park in the district, for U.D.C. The contract is essentially of a type usually carried out by specialists in playing field and similar work, and involves making tennis courts, bowling greens and paths, as well as fencing, landscaping and incidental work. Documents from the Surveyor, Town Hall, Westhoughton. Deposit £10 10s. Tenders by Aug. 9.

**West Riding.**—Playground repairs and extensions at Great Houghton C.E. (Controlled) School, for C.C. Applications to the Divisional Architect, Bishopsgarth, Westfield Road, Wakefield, by July 25. Tenders by Aug. 8.

#### RIVER AND FLOOD PREVENTION WORKS

**\*East Suffolk.**—Supply of steelwork and timber for piling of river banks, for C.C. Tenders by Aug. 8.

**Huntingdonshire.**—Improvement of 140 chains of dykes by dragline excavator at Newton's Tick Fen Farm, Warboys, for C.C. Documents from the County Land Agent, Walden House, Huntingdon. Tenders by Aug. 2.

#### ROAD, BRIDGES AND SITE WORKS

**Baildon, Yorks.**—Surfacing approximately 5,000 sq. yd. of carriageway at the Knoll estate with hot rolled asphalt, and for executing the necessary works of kerb and raising and surface preparation, for U.D.C. Documents from the Council's Surveyor, Town Hall, Baildon. Tenders by Aug. 20.

**Bangor, Caerns.**—Making-up of Pen y Ffridd Road, for City Council, including the following main items: Approx. 130 sq. yd. concrete carriageway, 40 lin. yd. concrete kerb, 75 sq. yd. tarmacadam and 500 sq. yd. cold asphalt footways, and repairs to existing work. Documents from the City Surveyor, Town Hall, Bangor. Deposit £3 3s. Tenders by July 25.

**Bedfordshire.**—Making-up of the following roads, for C.C.: Suncte Avenue and Barrie Avenue, Dunstable, consisting of regulating and surfacing the existing carriageway and footpaths and soiling verges, the length of the works being approx. 290 lin. yd.; St. Michael's Avenue, Houghton Regis, including the construction of a new carriageway with kerbs and channel, footpaths, verges and storm water drainage, the length of the works being approx. 140 lin. yd.; Laburnum Grove, Streteley, including the construction of a new carriageway with kerbs and channel, footpaths,

verges and storm water drainage, the length of the works being approx. 90 lin. yd.; Brightwell Avenue, Totternhoe, consisting of the construction of a new carriageway with kerbs and channel, footpaths, verges and storm water drainage, the length of the works being approx. 140 lin. yd. Documents from the County Surveyor, Dents Road, Bedford. Deposit £2. Tenders by Aug. 5.

**Belfast.**—Demolition and replacement in reinforced concrete of the existing bridge carrying Airport Road across Connswater, for Harbour Commissioners. Documents from the Harbour Engineer, Harbour Office, Belfast. Tenders by July 29.

**Birmingham.**—Following, for City Council: Supplying, laying and maintaining approx. 4,400 super. yd. of bituminous macadam and fine cold asphalt, together with ancillary works, at Erdington Cottage Homes, Shenley Fields Home, Northfield and Junior Remand Home, Moseley Road. Documents from the office of Sir Herbert J. Manzoni, city engineer and surveyor, Civic Centre, Birmingham. I. Deposit £2 2s. Tenders by July 27.

**Bolton, Lancs.**—Trunk road, A.6, improvement, for B.C. Deposit £5 5s. Tenders by Aug. 8.

**Cambridge.**—Roads and sewers at Arbury Road housing estate, north site, stage 5, for City Council. Deposit £5 5s. Tenders by Sept. 1.

**Carmarthenshire.**—Widening and reconstruction of Llethy Road, Felinfoel, for C.C. Deposit £2. Tenders by July 26.

**Cuckfield, Sussex.**—Reconstruction of part of Lucastes Lane, Haywards Heath, for U.D.C., which includes 360 lin. yd. of kerbing, strengthening, shaping and surfacing of 180 lin. yd. of 18ft. wide carriageway, and 360 sq. yd. of new footway construction; also surface water drainage and other incidental works. Documents from the Surveyor, Council Offices, Oaklands, Haywards Heath. Deposit £1 1s. Tenders by Aug. 6.

**Dorset.**—Making-up of two streets in Ferndown, for C.C. Applications by July 30.

**Durham.**—Supply and laying of approximately 58,250 super. yd. of two-course, hot rolled asphalt 3in. thick on the Gateshead-Felling By-pass, Carlisle-Sunderland trunk road, A.184, for C.C. (agent authority for Ministry of Transport). Documents from the County Engineer and Surveyor, Aykeley Heads, Durham. Tenders by July 29.

**East Riding.**—Liverpool-Leeds-Hull trunk road, A.63, Welton to North Ferriby By-pass: Conversion of approx. 1.6 miles of the existing trunk road to dual carriageways, for C.C. The works consist of the construction of approx. 800yd. of dual carriageway and 2,000yd. of single carriageway, including earthworks, drainage and kerbing. Documents from the County Surveyor, County Hall, Beverley. Deposit £5, cheques payable to C.C. Plans seen at the Trunk Roads Office of the County Surveyor, Westminster Bank Chambers, Lairgate, Beverley. Tenders by Aug. 8.

**Esher, Surrey.**—Construction of one bus lay-by of approximately 135 sq. yd. in reinforced concrete, with kerbing and footpath works, and the reconstruction of a second lay-by, involving realigning of kerbing and surfacing in hardcore and tarmacadam at High Street, contract 307, for U.D.C. Documents from the Engineer and Surveyor's Department, Council Offices, Esher. Deposit £1 1s. Tenders by Aug. 8.

**Fifeshire.**—Dennyloanhead-Kincardine-Kirkcaldy-St. Andrews trunk road (A.985)—construction of a by-pass at Torryburn, for C.C., four miles west of Dunfermline, including construction of 4½ miles of road and five minor bridges principally of reinforced concrete. The contract includes earthworks, drainage, dry lean concrete base, bitumen macadam base course, hot asphalt wearing surface, fencing, walling, etc. Documents from the County Surveyor, County Offices, Belfield, Cupar, Fife. Deposit £5 5s. Tenders by Aug. 15.

**Glamorgan.**—Making-up of the following private streets, for C.C.:—(1) Ashdale Road, Penrhynwfer, the principal works comprising storm water sewer, 6in. diameter, 45 lin. yd. carriageway foundation and surfacing 810 sq. yd.; footpath foundation and paving, 540 sq. yd.; kerbing, 400 lin. yd., and incidental works. (2) Glossop Terrace, Pencoed, the principle works comprising storm water sewer, 6in. diameter, 47 lin. yd.; carriageway foundation and surfacing, 415 sq. yd.; footpath foundation and surfacing 443 sq. yd.; kerbing, 175 lin. yd., and incidental works. Documents from the County Surveyor, County Hall, Cardiff. Deposit £3 each. Tenders by Aug. 4.

**Godalming, Surrey.**—Works comprising 670yd. of concrete kerbing, 1,260 sq. yd. bituminous macadam footway paving, 85 sq. yd. artificial paving, and various ancillary works at four sites in the borough, for B.C. Documents from the Borough Engineer and Sur-

veyor, Branksome, Filmer Grove, Godalming. Deposit £2 2s. Tenders by Aug. 8.

**Gravesend, Kent.**—Reconstruction of approximately 2,090 sq. yd. of carriageway in reinforced concrete at Wrotham Road (part), for B.C. Documents from the Borough Engineer and Surveyor, 6 Woodville Terrace, Gravesend. Tenders by Aug. 15.

**Hampshire.**—Improvement of approximately quarter mile of the trunk road, A.30, east of Hatch (approximately three miles east of Basingstoke), for C.C. The works include earthworks, lean-mix concrete, macadam surfacing and hard shoulders, etc. Applications to H. N. Jenner, county surveyor, The Castle, Winchester, by July 29.

**Hertfordshire.**—Diversion of Hunters Lane, Leavesden, for C.C. The works, which consist of the construction of ¼ mile of new carriageway, comprise site clearance; 6,000 cu. yd. excavation; 1,000 lin. yd. footway edging; 3,000 lin. yd. kerbing; 1,750 tons asphalt; 2,500 cu. yd. lean mix concrete, and 1,800 lin. yd. of concrete post and chain link fencing. Documents from the County Surveyor, County Hall, Hertford. Tenders by Aug. 3.

**Higham Ferrers, Northants.**—Improvement of Cemetery Lane-Vine Hill Drive, for B.C. Apply by Aug. 22. Deposit £2 2s.

**Huddersfield, Yorks.**—First-stage road and sewer works at Bank End Lane and Templar Drive, Almondbury, for B.C., comprising approximately 535 lin. yd. of 9in. and 12in. diameter salt-glazed ware pipe sewers, 1,100 lin. yd. of kerb and channel foundations, 2,750 sq. yd. of pitched carriageway foundations, together with concrete manholes, gullies and ancillary works. Documents from A. L. Percy, borough engineer and surveyor, High Street Buildings, Huddersfield. Deposit £2 2s. Tenders by July 25.

**Iford, Essex.**—Resurfacing of footpaths, comprising approximately 5,000 sq. yd. of cold asphalt, together with incidental works, in parks, for B.C. Applications in writing, to the Borough Engineer and Surveyor, Town Hall, Iford. Deposit £2 2s. Tenders by July 26.

**Irvine, Ayr.**—Site clearance, construction of 80yd. of 9in. ferro-concrete sewer and 60yd. of 6in. ferro-concrete sewer with ancillary works and first stage road works for Burnside housing site, for 49 houses, for B.C. Documents from R. W. Morrison, burgh surveyor, Heathfield, Kilwinning Road, Irvine, who will arrange to point out the site to intending offerers. Tenders by July 25.

**Kidsgrove, Staffs.**—Making-up of Woodside Avenue, for U.D.C. Documents from the office of the Engineer and Surveyor, Town Hall, Kidsgrove. Deposit £2 2s. Tenders by July 28.

**Kidsgrove, Staffs.**—Improvement of a length of 55yd. of Coalpit Hill, Talke, for U.D.C. The works comprise excavation, erection of retaining walls in stone-faced concrete, laying of kerbs and channels, making-up carriageway in narrow widths, fencing and other ancillary works. Documents from the Engineer and Surveyor, Town Hall, Kidsgrove. Deposit £2 2s. Tenders by July 28.

**Langport, Som.**—Construction of a car park, for R.D.C. Deposit £2 2s. Tenders by Aug. 13.

**Leicester.**—Private Street works, contract 22, for City Council. Deposit £1 1s. Tenders by Aug. 18.

**London.**—Lambeth Palace Road diversion, for C.C. Deposit £3. Tenders by Aug. 22.

**Luton, Beds.**—Road improvement works in Putridge Road, including approximately 1,000 sq. yd. of carriageway construction, 120 lin. yd. of kerbing and other appurtenant works, for B.C. Documents from the Borough Engineer, Town Hall, Luton. Deposit £2 2s. (cheques payable to Luton Corporation). Tenders by July 28.

**Lydd, Kent.**—Works of levelling Lydd Churchyard extension (otherwise known as Lydd Cemetery), Mill Road, for B.C. Documents from the Borough Surveyor, Guild Hall, High Street, Lydd, Romney Marsh, Kent. Tenders by July 25.

**Malden and Coombe, Surrey.**—Construction of carriageways, footways and sewers, for B.C.

**Mere and Tisbury, Wilts.**—Main site works contract at The Avenue, Tisbury, for R.D.C., comprising approx. 1,000 sq. yd. of tarmacadam roadway, main footpaths, and storm water drains. Documents from Bothams and Brown, architects, 32 Chipper Lane, Salisbury. Deposit £2 2s. Plans seen at the Council Offices, Mere. Tenders by July 30.

**Middlesex.**—Duplication of carriageways on Uxbridge Road, A.4020, between Crossway and Long Lane, Hillingdon, for C.C., comprising the construction of approx. 0.5 mile of dual 24ft. carriageways between the above points. The carriageways are to be constructed of a sub-base of clinker concrete; a base of reinforced concrete and hot-rolled asphalt surfacing. The roadworks include earthworks, surface water drainage, bus-bays, kerbing,

footways, walls and fencing, and ancillary works, including demolitions. Documents from the County Engineer and Surveyor, Middlesex House, 20 Vauxhall Bridge Road, London, S.W.1. Deposit £20. Tenders by Aug. 10.

**Mitcham, Surrey.**—New entrance roadway, bowling green, footpaths, fencing, gates and water supply at The Canons, Madeira Road, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Mitcham. Tenders by July 30.

**Newbury, Berks.**—Kerbing and footpaths, for B.C. Tenders by Aug. 17.

**Newport, Mon.**—Construction of Lilleshall Street (part), for B.C., including kerbing, channelling, pitching and surfacing of approximately 580 sq. yd. of carriageway and 290 sq. yd. of footways. Documents from the office of the Borough Engineer, Civic Centre, Newport, Mon. Deposit £2 2s. Tenders by July 27.

**Newtownards, Down.**—Reconstruction and widening of carriageways and footways at North Road, Upper North Street and Victoria Avenue, Newtownards, together with the provision of retaining walls, services and ancillary works, for B.C. Contract provides for (approximately) (1) excavation of 3,500 cu. yd. of earth embankments; (2) construction of 5,000 sq. yd. of hardcore and bituminous macadam carriageways; 2,000 sq. yd. of concrete flagged footways; 180 lin. yd. of mass concrete, stone faced retaining walls, and (3) laying of water and gas mains, together with other ancillary works. Documents from the Borough Surveyor, 26 Frances Street, Newtownards. Deposit £3. Tenders by Aug. 2.

**Northamptonshire.**—Footbridge at Kislingbury, for C.C. Deposit £2. Tenders by Aug. 8.

**Northumberland.**—Supply and laying of hot rolled asphalt, for C.C. Tenders by Aug. 1.

**Peterborough.**—Lincoln Road reconstruction, for City Council. Deposit £2. Tenders by Aug. 9.

**Portadown, Armagh.**—Supplying and laying a single hot-rolled asphalt wearing course, 1¾in. thick, for B.C. The works are contained in six streets, and comprise an approx. total area of 23,000 sq. yd. Documents from the Borough Surveyor, Tavanagh House, Thomas Street, Portadown. Deposit £2 2s. Tenders by Aug. 3.

**Port Talbot, Glam.**—Construction of two bridges, each spanning railway tracks, Baglan-Sandfields link road, for B.C. The overall lengths of the bridges are 90ft. and 88ft. each in three spans. The work will include the provision of precast prestressed concrete decking, reinforced concrete piers, piling, etc., and the formation of approaches with slag filling from the Council's tip. The details of the design for the prestressed concrete decking, piers, supports and piling to be provided by the tenderer. Submit names to W. King Davies, town clerk, Municipal Buildings, Port Talbot, by July 26.

**Potters Bar, Middx.**—Widening a section of The Walk for a distance of 220 lin. yd., for U.D.C. The work consists of tree felling, reconstruction of surface water drainage, construction of a footway and verges, and reconstruction of an area of reinforced concrete carriageway; also fencing and incidental works. Documents from the office of the Engineer and Surveyor, Wylyotts Manor, Darkes Lane, Potters Bar. Deposit £2 2s. Tenders by Aug. 8.

**Preston, Lancs.**—Supplying and laying of approximately 8,200 sq. yd. of hot rolled asphalt in Blackpool Road, together with heating and planing and other preparatory work, for B.C. Documents from the Borough Engineer and Surveyor, Municipal Building, Preston. Deposit £2 2s. Tenders by Aug. 8.

**Radcliffe, Lancs.**—Reconstruction of footways in various streets, using precast concrete flags and kerbs, for B.C. Documents from the Borough Engineer, Town Hall, Radcliffe. Tenders by Aug. 1.

**Radcliffe, Lancs.**—Reconstruction of footpaths and carriageway in James Street, for B.C. Documents from the Borough Engineer, Town Hall, Radcliffe. Tenders by Aug. 1.

**Romford, Essex.**—Construction of the following, for B.C.: (1) Parkland Avenue (part) and Lake Rise (part) private street works, consisting of 1,400 sq. yd. of bitumen macadam on hardcore carriageway, together with drainage, kerbing, paving, lighting, and incidental works; (2) Parkway (part) private street works, consisting of 300 sq. yd. of bitumen macadam on hardcore carriageway, together with drainage, kerbing, paving, lighting, and other incidental works. Documents from the Borough Engineer and Surveyor, Town Hall, Romford. Deposit £2 2s. cheque. Tenders by Aug. 5.

**Rutland.**—Gunthorpe Road improvement, A.6003, which is located approx. 2½ miles south of Oakham, on the Oakham-Uppingham road, A.6003, for C.C. The scheme requires the

construction of 400 lin. yd. of new carriage-way, 24ft. wide, excavation of approx. 1,200 cu. yd., 800 lin. yd. concrete kerbing, drainage and ancillary works. Documents from the County Surveyor, County Offices, Oakham, Rutland. Deposit £2 2s. Drawings seen by appointment at County Surveyor's office. Tenders by July 28.

**Rutland.** — Improvement, one mile east of Ketton, on the Ketton-Tinwell Road, A.6121, for C.C. The scheme requires the construction of 400 lin. yd. of new carriage-way, 24ft. wide, excavation of approx. 1,000 cu. yd. of material, together with 320 lin. yd. of fencing, drainage and ancillary works. Documents from the County Surveyor, County Offices, Oakham, Rutland. Deposit £2 2s. Drawings seen by appointment at County Surveyor's office. Tenders by July 28.

**\*Spennborough, Berks.** — Making-up of Fountain Street, for B.C. Deposit £2 2s. Tenders by July 30.

**\*Staffordshire.** — Birmingham-Preston Motorway, Staffordshire section, contracts B, C and D, for C.C. Deposit £50 each. Tenders by Sept. 20.

**Stirling.** — Construction of a new bridge over the Glazert water and the approaches connecting with the Callander-Kirkintilloch Road, B.822, at the east end of Lennoxtown, for C.C. The bridgeworks comprise reinforced concrete superstructure with mass concrete abutments. River span, 50ft.; width between parapets, 32ft.; and total length of approaches, 120yd. Documents from the County Road Surveyor, Causewayhead School, by Stirling. Deposit £3, cheque payable to Council. Plans seen by appointment at the County Road Surveyor's office. Tenders by Aug. 13.

**Taunton, Som.** — Hot-rolled asphalt resurfacing on trunk road A.358, approx. 8,000 sq. yd., and ancillary works, for B.C. Documents from Borough Engineer, St. Paul's House, Taunton. Tenders by July 25.

**\*Torquay, Devon.** — Construction of multi-storey car park at Beacon Quay, for B.C. Submit names by July 30.

**Welshtown, Monts.** — Construction of a service road extension and the laying of sewers at Oldford housing site, for B.C. Documents from D. Mervyn Edwards and Moreton, architects, 5 Lower Brook Street, Oswestry. Deposit £3 3s., payable to Council. Tenders by Aug. 6.

**Westhoughton, Lancs.** — Construction of 615yd. of by-pass road with all incidental works in connection with a diversion of Leigh Road, B.5235, for U.D.C. Documents from the Surveyor, Town Hall, Westhoughton, Bolton. Tenders by Aug. 8.

**West Riding.** — Construction and making-up of a total length of 133yd. of the private street known as Sikes Road, North Anston, in the rural district of Kiveton Park, for C.C. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Deposit £1, cheques payable to West Riding Treasurer. Tenders by Aug. 3.

**West Riding.** — Construction and making-up of a total length of 355yd. of the private streets known as Scarsdale Street and Clarence Street, in the rural district of Kiveton Park, for C.C. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Deposit £1, cheques payable to West Riding Treasurer. Tenders by Aug. 3.

**West Riding.** — Resurfacing of existing pavings and provision of new pavings at the County Police Station, Market Street, Mexborough, for C.C. Applications to the Divisional Architect, Planet Road, Adwick-le-Street, near Doncaster, by July 26. Tenders by Aug. 26.

**Whitstable, Kent.** — Making-up and sewerage of Russell Drive (part of), length 393ft. approx., for U.D.C. The works comprise the construction of concrete carriage-way, tarmacadam footways, grass verges, and the construction of foul and surface water sewers. Documents from the Engineer and Surveyor, The Castle, Whitstable. Tenders by Aug. 8.

**Wiltshire.** — Realignment and widening of five separate curves on the road leading from Bulford Military Camp to the Tidworth Military Camp, for C.C. The work comprises the excavation for, and construction of, new carriage-way approx. 1,700 lin. yd., together with kerbing, surface water drainage and fencing in parts. Documents from County Surveyor, County Hall, Trowbridge. Deposit £2. Tenders by July 25.

**Worthing, Sussex.** — Following, for B.C.: Pendine Avenue—the construction of 2,390 sq. yd. of carriage-way with flint foundation and 1in. coarse cold asphalt, and 1,273 sq. yd. of flag paving. Documents from Borough Engineer and Surveyor, Town Hall, Worthing. Deposit £2 2s. Tenders by Aug. 2.

#### SEWERAGE, SEWAGE AND REFUSE DISPOSAL

**\*Banbury, Oxon.** — Southam Road sewerage, contract 3, for B.C. Deposit £10 10s. Tenders by Aug. 22.

**Benfleet, Essex.** — Mechanical loading, hauling and tipping of an accumulation of some 1,500 cu. yd. of air-dried sludge from the sewage disposal works, South Benfleet, to the refuse tip, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Thundersley. Tenders by Aug. 2.

**Birmingham.** — Construction of a circular reinforced concrete pumping station with a precast concrete segmental sub-structure, 25ft. deep, and a circular brick superstructure; also 120 lin. yd. 15in. dia. cast-iron rising main, stoneware pipe sewers, and incidental works, at Argyle Street, for City Council. Documents from the office of Sir Herbert J. Manzoni, city engineer and surveyor, Civic Centre, Birmingham, I. Deposit £2 2s. Tenders by Aug. 17.

**Bradfield, Berks.** — Following works, for R.D.C.: (1) Bradfield Village—laying of approximately 423 lin. yd. of 6in. diameter glazed stoneware pipes; 47yd. 6in. diameter cast-iron pipes and 232 lin. yd. of 4in. cast-iron rising main, together with the construction of 15 manholes, one pump-house for pumping plant and addition of screening and humus chambers to the existing sewage disposal plant. (2) Beenham Village—laying of approximately 668 lin. yd. of 6in. glazed stoneware pipes; 250 lin. yd. of 4in. cast-iron rising main, together with the construction of 16 manholes, two new pumping chambers and extensions to the existing sewage disposal plant. Documents for either or both schemes from the Council Offices, 26 Bath Road, Reading. Deposit £3 3s. Plans seen at the Council's Offices or at the Architect's Offices, 37a Bartholomew Street, Newbury. Tenders by July 29.

**Bridge-Bleas, Kent.** — Supply of duplicate electrically driven vertical spindle direct coupled centrifugal sewage pumping plant to discharge approx. 75 gallons/minute against a total head of approx. 105ft., together with ancillary equipment at Tyler Hill, for R.D.C. Documents from P. J. Thackray, engineer and surveyor, 41 Old Dover Road, Canterbury. Tenders by Aug. 24.

**\*Bristol.** — Main drainage, contract 13, for City Council. Deposit £10. Tenders by Aug. 22.

**Chigwell, Essex.** — Surface water sewer at Pyres Lane, Loughton, for U.D.C., comprising 156 lin. yd. of 24in. dia. concrete tubes, concrete surrounds and manholes, and 160 lin. yd. 4in. dia. land drains. Documents from the Engineer and Surveyor, Council Offices, Loughton. Deposit £2 2s. Tenders by July 29.

**Cirencester, Glos.** — Construction of an access road in stone pitching approximately 215yd. in length to the new sewage disposal works at Quenington, for R.D.C. Documents from A. H. S. Waters and Partners, consulting engineers, 25 Temple Row, Birmingham, 2, or A. Walter, clerk of the Council, 5 Dyer Street, Cirencester. Deposit £2 2s. Tenders by July 29.

**Clutton, Som.** — Provision and laying of approx. 200yd. of 6in. dia. sewer and 200yd. of 4in. dia. sewer at Hobbs Wall and Timbury Road, respectively, together with manholes and incidental works, for R.D.C. Documents from Public Health Inspector and Surveyor, Council Offices, Temple Cloud, near Bristol. Deposit £1 1s. Tenders by July 27.

**Colne Valley, Yorks.** — Alterations to existing storm overflow and flow recording manholes, installation of control equipment, mechanically raked screens, and other appurtenant works, contract A.1, for U.D.C. Documents from the Council's Engineer and Surveyor, Town Hall, Cross Street, Slaithwaite, Huddersfield. Deposit £1 1s. Tenders by July 27.

**Cwmbran, Mon.** — Llantarnam relief sewer, for U.D.C., including 160yd. 6in., 140yd. 9in., and 620yd. 12in. sewers, together with 12 manholes and ancillary works. Documents from the Surveyor, Council Offices, Cwmbran. Deposit £3 3s. Tenders by Aug. 3.

**Dewsbury, Norfolk.** — Supply and laying of some 1,200yd. of 6in. diameter glazed stoneware sewers and drains and 240yd. of 4in. diameter asbestos-cement pumping main; construction of a small sewage disposal works, brick underground pumping station, fencing and allied works at Alburgh, for R.D.C. Documents from the Engineer and Surveyor, Council Depot, Long Stratton, Norwich. Deposit £3. Tenders by July 25.

**Deudraeth, Merioneth.** — Harlech sewerage extensions, contract 1, for R.D.C., including laying approx. 3,600yd. of mainly concrete sewers, 6in. dia., the construction of manholes, and incidental work. Applications, in writing, to Richards and Dumbleton, consulting engineers, Cornwall Buildings, 45 Newhall Street, Birmingham, 3, and Greenways, Portmadoc, Caerns. Deposit £3, payable to R.D.C. Plans also seen at the office of L. Ellis, clerk of the Council, Council Offices, Penrhynedraeth, Merioneth. Tenders by Aug. 20.

**\*Dorset.** — Surface water drainage scheme in West Parley, for C.C. Submit names by July 30. Deposit £2.

**Fareham, Hants.** — Fareham Town main drainage, fr U.D.C., comprising construction of approximately 7,700 lin. yd. of 9in. to 33in. diameter stoneware, concrete, spun-iron and steel pipe sewers, together with the necessary manholes, etc.; construction of a culvert-cum-footbridge in prestressed concrete, and all appurtenant works. Documents from Waterhouse and Routhwaite, consulting engineers, 165 Westmorland Road, Newcastle upon Tyne, 4. Deposit £5 5s. Drawings seen at the offices of the Council's Engineer and Surveyor, Westbury Manor, Fareham, Hants, or at the offices of the Consulting Engineers. Tenders by Aug. 29.

**Gloucestershire.** — Surface water drainage at Whittucks Road, Hanham, near Bristol, for C.C., including the construction of approximately 1,500yd. of surface water sewer (15in. to 33in. diameter pipes), 18 manholes and ancillary works. Documents from the County Surveyor, Quay Street, Gloucester. Tenders by Aug. 10.

**Halifax, Yorks.** — Construction of approximately 450 lin. yd. of 6in. diameter salt-glazed ware sewer with five precast concrete manholes at Hays Lane, Mixenden, for B.C. Documents from the Borough Engineer, Crossley Street, Halifax. Deposit £1 (cheques payable to Halifax Corporation). Tenders by July 29.

**\*Horncastle, Lincs.** — Marcham-le-Fen sewerage scheme, contract 2, pumping plant, for R.D.C. Deposit £3 3s. Tenders by Aug. 10.

**\*Kirby-in-Ashfield, Notts.** — Supply and installation of pumping machinery, etc., at sewage disposal works, for U.D.C. Deposit £3. Tenders by Sept. 1.

**Leyburn, Yorks.** — Extension of sewer at St. Mary's Mount, for R.D.C., including providing and laying 343 lin. yd. of 6in. glazeware pipes, together with the construction of manholes and all contingent works. Documents from the office of W. Sutton, surveyor, Thorndon Hall, Leyburn. Tenders by July 29.

**Louth, Lincs.** — Tetney and North Thoresby sewerage scheme, contract 6, for R.D.C., comprising (1) duplication of the existing sewage treatment works at Tetney, Lincs., including the construction of a balancing tank, settlement tank, filter bed, humus tank, pipelines, paths, etc.; (2) construction of approximately 1,850 lin. yd. of 6in. diameter concrete pipe sewers, manholes, etc., in Tetney; (3) construction of approximately 1,000 lin. yd. of 6in. diameter concrete pipe sewers, manholes, etc., in North Thoresby, Lincs. Documents from the Council's engineers, John H. Haiste and Partners, Belmont House, 20 Wood Lane, Headingley, Leeds, 6. Deposit £3 3s. (cheques payable to Council). Tenders by Aug. 8.

**Melton and Belvoir, Leics.** — Following, for R.D.C.: (Contract 1) Approx. 67 lin. yd. of 6in. sewer in the village of Long Clawson; (2) approx. 60 lin. yd. of 6in. sewer in the village of Saxelby; (3) approx. 390 lin. yd. of 6in. sewer in the village of Thorpe Satchville. Documents from the Engineer and Surveyor, Warwick Lodge, Dalby Road, Melton Mowbray. Tenders by Aug. 13.

**Newcastle-under-Lyme, Staffs.** — Betley sewerage and sewage disposal, for R.D.C. Works comprising construction of about 100 lin. yd. of spun-iron and 4,000 lin. yd. glazed stoneware pipe sewers, 12in. and 6in. in diameter, about 200 lin. yd. of spun-iron rising main, 4in. in diameter, an ejector station, and sewage disposal works, comprising screening and detritus tanks, sedimentation tanks, storm water tanks, dosing chamber, bacteria beds, humus tanks, pump house and pump well, sludge lagoons and incidental works. Documents from F. W. Ramm, clerk of the Council, Sidmouth Avenue, The Brampton, Newcastle-under-Lyme. Deposit £5 5s. Tenders by Aug. 12.

**\*Northampton.** — Reconstruction of Roade sewage disposal works, for R.D.C. Deposit £3 3s. Tenders by Aug. 27.

**Oakham, Rutland.** — Following, for U.D.C.: Laying of approx. 4,100yd. of 6in., 9in., 12in., 15in. and 18in. dia. concrete tube, cast-iron and steel sewers, together with manholes, and the construction of five sludge drying beds and other small modifications at the sewage treatment works. Documents from the offices of Pick, Everard, Keay and Gimson, engineers, 6 Millstone Lane, Leicester. Deposit £5 5s. Tenders by Aug. 24.

**\*Pocklington, Yorks.** — Melbourne sewerage scheme, contracts 1 and 2, for R.D.C. Deposit £3 3s. each. Tenders by Aug. 19.

**Porthcawl, Glam.** — Construction of approximately 2,200 lin. yd. of 9in. diameter and 630 lin. yd. of 12in. diameter concrete pipe sewers, together with manholes and the cones and other appurtenant works, contract 9, for U.D.C. Documents from John Taylor and Sons, Artillery House, Artillery Row, Victoria Street, Westminster, S.W.1. Deposit

£5 (cheques payable to the Council). Drawings seen at the offices of the Consulting Engineers or at the office of the Council's Engineer, Council Offices, Porthcawl. Tenders by Aug. 15.

**Southall, Middx.**—Southern soil relief sewer, for B.C. Submit names by first post, July 27.

**Stamford, Lincs.**—Construction of sludge digestion tanks, etc., for B.C. Deposit £5 5s. Tenders by Aug. 15.

**Stratford-upon-Avon, War.**—Supply and erection of the following equipment in connection with main pumping station and sewage disposal works, for B.C. Each item will be tendered for separately, but manufacturers may tender for more than one item if they wish: (a) Pumping equipments (i) main pumping station (flows up to 1,035 cumins), (ii) recirculation pumping station (flows up to 518 cumins); (b) fine screens, etc.; (c) detritus removal mechanism; (d) circular tank scraper mechanisms; (e) filter distribution equipment; (f) equipments for primary and secondary digesters; (g) flow recording instruments. Apply for full particulars to P. C. Smart, borough engineer, Rother Street, Stratford-upon-Avon. Tenders by Aug. 29.

**Truro, Corn.**—Construction of about 669yd. of 9in. diameter British Standard glazed stoneware pipe sewer and eight concrete tube manholes, Newham Fields, for City Council. Documents from the City Engineer and Surveyor, Municipal Buildings, Truro. Deposit £2 2s. (crossed cheque). Tenders by July 25.

**Wakefield, Yorks.**—Sittington drainage, 1960, for R.D.C., comprising the construction of a pumping station and the laying of approximately 300 lin. yd. of 4in. and 8in. spun-iron rising mains, and ancillary works at Horbury Bridge, near Wakefield. Documents from the Engineer and Surveyor, Council Offices, 18 St. John's North, Wakefield. Tenders by Aug. 13.

**West Penwith, Corn.**—Construction of St. Erth and Canonstown sewerage scheme, for the R.D.C., including the provision and laying of 1,751yd. of 4in. diameter, 6.257yd. of 6in. diameter stoneware sewers, 663yd. of 4in. diameter, 103yd. of 6in. diameter spun-iron sewers or rising mains, and the construction of 167 manholes, two ejector stations, together with a sewage disposal works comprising concrete tanks, conventional biological filters, drying beds, pumphouse and ancillary works. Documents from G. H. Ivory and Partners, consulting engineers, 24 Atheneum Street, Plymouth. Deposit £5 5s. (cheques payable to R.D.C.). Tenders by Aug. 11.

**Witney, Oxon.**—Main drainage of North Leigh, W24/4, contract I, for R.D.C. Deposit £3 3s. Tenders by Aug. 24.

**Wycombe, Bucks.**—Stokenchurch sewerage scheme, for R.D.C., comprising laying of approximately 31,000 lin. yd. of 4in., 6in., 9in. and 12in. diameter concrete and stoneware sewers; 1,000 lin. yd. of 4in. spun-iron rising mains; and the construction of 373 concrete manholes; one pumping station building and one ejector station building, together with road reinstatement and other ancillary works. Documents from K. E. M. Daniels, engineer and surveyor, 8-9 Easton Street, High Wycombe. Tenders by Aug. 27.

#### STREET LIGHTING

**Chesterton, Camb.**—Street lighting conversion and improvement scheme, for R.D.C. Deposit £2 2s. Tenders by Aug. 16.

**Cuckfield, Sussex.**—Erection only of 23 octagonal steel lighting columns and the fixing and wiring of 23 3/80-watt fluorescent lanterns, complete with all necessary control gear, group A standard, for U.D.C. Documents from the Surveyor, Council Offices, Oaklands, Havards Heath. Deposit £1 1s. Tenders by July 28.

**Droitwich, Worcs.**—Supply and erection of 55 columns etc. on A.38 for B.C. Deposit £2 2s. Tenders by July 28.

**East Ham, Essex.**—Street lighting, Burges Road (part) and Watson Avenue (part), for B.C. Deposit £2 2s. Tenders by Aug. 15.

**Enfield, Middx.**—Public lighting improvements, 1960 scheme, for B.C. Deposit £2. Tenders by Aug. 22.

**Epsom and Ewell, surrey.**—Erection of 203 group A street lighting columns, 25ft. mounting height, with 140-watt sodium lamps, together with wiring and fixing of lanterns and auxiliary gear, for B.C. Columns and equipment to be supplied by the Corporation. Documents from the office of Colin Cobbett, borough engineer and surveyor, Town Hall, Epsom. Deposit £2 2s. Tenders by July 25.

**Eston, Yorks.**—Supply and erection of 51 street lighting units at High Street and Church Lane, for U.D.C. Documents from the Engineer and Surveyor, 246 Normanby Road, South Bank, Middlesbrough. Deposit £2. Tenders by July 28.

**Harlow, Essex.**—Street lighting, scheme III, for U.D.C., including the erection of 89 metal or concrete group B columns, four concrete group A columns, fixing of 24 wall brackets, and the fitting and wiring of lanterns and control gear, together with ancillary works, in various parts of the urban district. Documents from A. W. R. Webb, engineer and surveyor, Town Hall, Harlow. Deposit £2 2s. cheques payable to U.D.C. Tenders by July 30.

**Herefordshire.**—Installation of approx. 210 lighting units to traffic signs on the Ross Spur Motorway, located between Ross and Brockenhurst Common, north of Tewkesbury, in the counties of Hereford, Gloucester and Worcester, for C.C. The work involves the fixing of 80 8- and 6-watt lighting units (which will be supplied to the contractor) and the wiring up in threaded steel conduits. Documents from the County Surveyor, Portfield House, Hereford.

**Redcar, Yorks.**—Street lighting, 1960-61, for B.C. Tenders by Aug. 12.

**Renfrew.**—Erection of alternative schemes (a) three 80-W fluorescent, and (b) 400-W mercury discharge at Inchinnan Road (A.8.), for B.C. Documents from P. J. S. Buchanan, lighting inspector, Municipal Buildings, Renfrew. Tenders by Aug. 31.

**Surrey, Surrey.**—Provision of improved street lighting, 1960-61 programme and T.P. road 12, for B.C., including the installation of group A lighting, 193 sodium and 270 colour corrected mercury points. Documents from the office of R. Thirlway, borough engineer and surveyor, Council Offices, Ewell Road, Surbiton. Tenders by Aug. 10.

**Wadebridge, Corn.**—Supply and installation of equipment as follows, for R.D.C.: 33 400-volt colour-corrected mercury discharge lamps, mounted at 25ft., for trunk road A.39 at Wadebridge, and six similar lamps on the Platt, Wadebridge. Documents from the surveyor, A. E. Bewes, Council Offices, Wadebridge. Deposit £2 2s. Tenders by Aug. 8.

**Wanstead and Woodford, Essex.**—Installation of colour corrected mercury street lighting systems in Snakes Lane East (group A), Snakes Lane West (group B), and The Broadway (group B), for B.C. The works include taking down existing short gas columns, provision and erection of new equipment and appurtenant works. Documents from the Borough Engineer, Municipal Offices, Woodford, E.18. Deposit £2. Tenders by July 25.

**Wortley, Yorks.**—Street lighting at Ecclesfield, Stannington, Chapeltown, and High Green, near Sheffield, for R.D.C.: Installation of colour corrected mercury street lighting schemes, complete, as follows: (Scheme 54) Ecclesfield bus route—67 125-watt lamps on 20ft. columns; (55) Stannington bus route—60 80-watt lamps on 15ft. columns; (57) Chapeltown to High Green—74 125-watt lamps on 20ft. columns; (58) (part 1) Chapeltown—29 250-watt lamps on 25ft. columns. Concrete columns are specified, with some special decorative columns which may be of materials other than concrete, for certain sections of schemes 54, 55 and 57. Documents from Arthur Wikeley, engineer and surveyor, Council Offices, Grenoside, near Sheffield. Tenders by Aug. 10.

#### INTERNATIONAL CONTRACTS

**Bombay, India.**—Dredging of the Main Harbour Channel, together with tanker and explosive anchorages, phases 1 and 2, tender E35/1960, for Port Trust, involving the dredging, removal and disposal at sea of about 7.5 million cu. yd. (*in situ*) of silt and clay. Tender documents comprising instructions to tenderers, form of tender, general conditions of contract, special conditions, schedule of quantities and rates and drawings, can be inspected at the office of S. B. Dalal, chief engineer, Bombay Port Trust, Ballard Road, Fort, Bombay, I, or purchased on payment of Rs.300/- (net, excluding remittance charges) per set of three copies. Two copies will have to be submitted by the intending tenderer, whilst the third is intended to be retained by him for his record. The purchase price of the tender documents is not refundable. No tender will be considered which is not made on the prescribed form and which is not accompanied by the receipt for the deposit towards earnest money of a sum of Rs.25,000/- with the Chief Accountant, Bombay Port Trust, or a sum of £2,000 with the London branch of the State Bank of India. The earnest money will be refunded to unsuccessful tenderers. Tenders by Sept. 12.

**India.**—Urgent supply f.o.b. of the following materials and equipment required for the

construction of a major pipeline project in India which is scheduled to commence in November, 1960, for the Burmah Oil Company (Pipelines), Ltd., on behalf of Oil India Private, Ltd.: Item 1 specification VF/13—flanged valves for pump station services, approximately 1,100 lubricated taper plug valves ASA classes 125 and 150, in sizes ranging from 1/2in. to 6in. N.B.; approximately 180 F.S. globe valves ASA class 300, in sizes 1/2in. and 3/4in. N.B.; approximately 80 F.S. check valves ASA class 300, sizes 1/2in. and 3/4in. N.B. Item 2 specification VF/14—seamless butt welding fittings; fitting to ASA B.16.9 and ASTM 234 include elbows, tees, reducers and welding nipples in sizes ranging from 1/2in. to 6in. N.B. Item 3 specification ML/8—pipeline casing seals and bushes, approximately 160 100ft. long casing sets required in sizes 16in.-20in. and 14in.-18in. N.B. Item 4 specification ML/9—cathodic insulating sets for flanges, approximately 110 sets for 10in.-16in. N.B. ASA class 150 and 600 flanges. Item 5 specification VF/15—F.S. flanges—F.S. slip-on welding type flanges to ASA B.16.5, approximately 3,500 class 150 and 300 flanges ranging from 1/2in. to 6in. N.B. Interested manufacturers (not agents) of any of the items listed above should apply to the company at Britannic House, Finsbury Circus, London, E.C.2. All applications should quote the specification number(s) required and should be received by Aug. 2.

**Iraq.**—Supply and erection of a buried natural gas pipeline from Basrah Petroleum Company's plant at Pumaila to the Basrah power station at Nijibiyah and a proposed fertiliser project at Abul Fius, for the Republic. The scheme will incorporate a dehydration plant, odourising plant and metering stations. Documents from the Ministry of Industry, Directorate of Legal Affairs, Baghdad, Embank and Partners, Ltd., consulting engineers, 10-11 Grosvenor Place, London, S.W.1. from the nearest embassy or legation of the Republic of Iraq, on the respective payment of the sum of £12,25/- for each set of documents. Tenders by Aug. 31.

#### AWARDS

##### BUILDING AND DECORATING (See also Housing Schemes)

**Ashbourne, Derby.**—Exterior painting of 145 dwellings on the Park Land housing estate, for U.D.C. P. W. Thornley, engineer and surveyor:—P.D. Contractors, Ltd., 145 Etruria Road, Hanley, Stoke-on-Trent.

**Barrow-in-Furness, Lancs.**—Alterations to Drumard House, Abbey Road, to form training centre, for B.C.:—Direct Labour.

**Brighton, Sussex.**—Following, for B.C.: Improvements to cottages at Housedean Farm:—G. Watts and Co., Ltd., 4 Trafalgar Terrace, Brighton, I, £3,908 (recommended); H. A. Pocock, Ltd., £4,450; T. J. Braybon and Son, Ltd., £5,900; G. J. King and Son, Ltd., £4,556; Gates and Sons, Ltd., £4,967; F. T. Wilson and Sons, Ltd., £6,358; Edward Cox and Co., Ltd., £3,982; John W. Ridge, Ltd., £5,453; Elliott Bros., Ltd., £4,734; A. J. Construction, Ltd., £4,148; Field and Cox, Ltd., £4,715.

Erection of three pavilions at Rookery, Blakers Park and Dyke Road Park:—Brym Warehouse, £1,042 (recommended); E. Slater, Ltd., £1,088; Astolat Co., Ltd., £1,249; H. Peacock and Son, Ltd., £1,842; Park Lines, Ltd., £1,900.

**Bristol.**—Following works, for City Council: First instalment on new accommodation for Redland College:—Griggs and Son, Ltd., 56 Victoria Street, London, S.W.1. £20,620 (recommended, subject to M.E. approval).

Supply and erection of 12 prefabricated garages, laying of tarmacadam approach roads and formation of garage bases at Dutton Close, Stockwood estate:—R. Hobbs and Co., Plantation Works, Portbury, near Bristol, £2,202; improvements and repairs to 34, 35 and 36 Richmond Terrace, Avonmouth:—F. Tappendin and Son, Ltd., Druid Hill, Bristol, 9, £3,576 recommended).

**Clitheroe, Lancs.**—Erection of a café on the Market Ground, for B.C. J. Newton Bell, borough engineer:—C. Underwood, 16 Cockerill Terrace, Barrow, near Whalley, £4,110 (accepted); J. Ford and Sons, £4,181; D. L. Grimshaw and Co., Ltd., £4,277; G. Catterall and Sons, Ltd., £4,821.

**Corby, Northants.**—Erection of a minerals depot in Corby, for the Co-operative Wholesale Society, Ltd. Plans by staff architect's department:—Direct Labour. Estimated cost £12,472 Work commenced.

**Corwall.**—Erection of an ambulance depot, comprising garages and administrative

building, at Trevaylor Road, Falmouth, for C.C.:—G. G. Davey and Son, Ltd., Windsor Quarry, Falmouth, £8,113.

**Dewsbury, Yorks.**—Following works, for B.C.:—Painting Ravensthorpe Secondary and Boothroyd Lane Junior Schools, for B.C.:—Direct Labour, £913 and £724, respectively; erection of a salt and sand store at George Street Depot:—Samuel Armitage and Sons, Ltd., Bradford Road, Dewsbury, £2,938; improvements to hall at Wheelwright Grammar School for Boys:—Direct Labour, £2,326 (all recommended).

**Doncaster, Yorks.**—Following works, for B.C.: Assembly hall at Rossington Hall Special School:—J. Beastall (Doncaster), Ltd., 14 Tickhill Road, Doncaster, £8,535; painting School of Art and High Melton Training College:—H. Snow and Son, 8 Green Hill, Haxey, Doncaster, £785, and Flecknell and Co., 42 Boundary Avenue, Wheatley Hills, Doncaster, £2,874, respectively (all recommended).

**Eastbourne, Sussex.**—Contract 3, building work at the Wish Tower, sun lounge and cafe, for B.C.:—Walter Llewellyn and Sons, Ltd., 3 Cornfield Terrace, Eastbourne, £68,054 (recommended).

**Finchley, Middx.**—Erection of an office block and canteen building at Squires Lane for the Central Electricity Generating Board:—Higgs and Hill, Ltd., Crown Works, South Lambeth Road, London, S.W.8. Estimated cost £200,000. Farmer and Dark, architects, Romney House, Tufton Street, London, S.W.1, and E. C. Harris and Partners, quantity surveyors, Lynton House, Tavistock Square, London, W.C.1.

**Grimsby, Lincs.**—Adaptations to provide accommodation for chronic sick patients at Immingham Hospital, for Sheffield Regional Hospital Board:—J. D. Walsham (Builders), Ltd., 117 Patrick Street, Grimsby, £11,713 (recommended).

**Huddersfield, Yorks.**—Following works, for B.C.: Erection of a block of shops and flats at Swan Lane, Lockwood. S. M. Richmond, borough architect:—Wm. Mallinson and Sons (Lockwood), Ltd., Albert Street, Lockwood, Huddersfield. Work commencing Sept.

Alterations to Royds Hall Secondary School:—Geo. Graham's Sons and Co., Tom Lane, Crosland Moor, Huddersfield. Work commencing Aug.

**Kesteven.**—Provision of a new kitchen at Heckington C. of E. School (Controlled), for C.C. J. W. H. Barnes, county architect:—J. E. Cooling, Cranwell, £2,975.

**Kidderminster, Worcs.**—Erection of an office block at Church Street, for Tomkinson, Ltd.:—Humphries and Bowdler, Larkhill, Kidderminster, estimated cost £25,000. S. N. Cooke and Partners, architects, 34 Harborne Road, Birmingham, and F. C. Graves, quantity surveyors, 14 Harborne Road, Birmingham. Work about to commence.

**Lancaster.**—Erection of first phase of city market, for City Council:—Nicholson and Wright, Ltd., Willow Lane, Lancaster, £48,372.

**Leicester.**—Builder's work for laundry improvements at Leicester Isolation and Chest Unit, for Sheffield Regional Hospital Board:—Cawrey, Ltd., 47 Gorse Hill, Anstey, Leicester, £9,282 (recommended).

**Leicester.**—Erection of a block of offices on site of Theatre Royal, for the Leicester Permanent Building Society:—Chitham and Co., Welford Road, Leicester. T. Worthington and Sons, architects, 178 Oxford Road, Manchester, 13, and C. S. Allott and Sons, consulting engineers, 1 North Parade, Manchester, 3.

**Maidstone, Kent.**—Extension to the Sutton Vallance School, for the Governors of the United Westminster Schools:—G. E. Wallis and Son, Ltd., 231 Strand, London, W.C.2. Estimated cost £77,557. Laurence King architect, 9 Gower Street, London, W.C.1; L. C. Roberts, quantity surveyor, 92 Avenue Chambers, Vernon Place, Southampton Row, London, W.C.1. Work commenced.

**Morecambe, Lancs.**—Erection of public conveniences opposite Happy Mount Park, for B.C.:—Heysham Building Co., Ltd., Middleton Road, Heysham. Estimated cost £7,480.

**Morpeth, Northumb.**—Builders' work for engineering services at St. George's Hospital, for Newcastle Regional Hospital Board:—R. Carse and Son, Ltd., Prospect Road, Amble £4,409.

**Newbiggin, Northumb.**—Erection of primary school at Newbiggin, for C.C. C. C. Brown, county architect:—R. Anderson (Builders), Ltd., Stanmore Road, Newcastle upon Tyne, £52,860.

**Newcastle upon Tyne.**—Alterations to department of dermatology at the Royal Victoria Infirmary, for the United Newcastle Hos-

pitals:—Harry Kindred (Newcastle), Ltd., 371 West Road, Newcastle upon Tyne, £38,570. Plans by staff architect, H. E. M. Dobson. T. Barrett, Sons and Partners, quantity surveyors, High Bridge, Newcastle.

Warehouse at Byker, for Glendenning and Sons. Arthur and Kirkup, architects, 13 Swinburne Street, Gateshead:—R. Anderson, Ltd., Stanmore Road, Newcastle upon Tyne.

**Newport, Mon.**—(a) External painting at Maindean Baths and (b) alterations and adaptations at 3 Clifton Place, for B.C.:—(a) J. H. Williams and Sons (Newport), Ltd., Kelveon Street, Newport, £1,233, and (b) Graingers and Son, 172 Corporation Road, Newport, £5,000 (recommended).

**Nidderdale, Yorks.**—Erection of public conveniences in St. Helena, Boroughbridge, for R.D.C.:—Whitehouse and Hodgson, 38 Harrison Grove, Starbeck, Harrogate, £1,945.

**North Riding.**—Erection of junior school at Marske, for C.C. J. H. Napper and Partners, architects, 133 Osborne Road, Newcastle upon Tyne:—Norman Thompson, Ltd., Stonehouse Street, Middlesbrough, £59,049.

**Northumberland.**—Following works, for C.C.: Erection of primary school at Kielder:—R. Carse and Son, Ltd., Prospect Road, Amble, £42,194; remodelling of the Birtley Church of England Controlled School—Cawood Wharton and Co., Ltd., Harrogate, £9,470.

**Nottingham.**—Veranda to Hope Ward and builder's work for food trolley lift at Mapperley Hospital, for Sheffield Regional Hospital Board:—Wm. Appleby and Son, 177 Castle Boulevard, Nottingham, £5,670 and £1,795, respectively (recommended).

**Petersfield, Hants.**—First phase of Swan Street development (large office block), for Raglan Developments, Ltd., Raglan House, Forty Lane, Wembley, Middx. Sir John Brown, A. E. Henson and Partners, architects, 117 Sloane Street, London, S.W.1:—W. T. Nicholls (Southern), Ltd., Tennyson Road, Southampton.

**Portsmouth.**—Following works, for City Council: Erection of Highbury Technical College:—Portsmouth, Gosport and District Builders Guild, Ltd., 28a Kingston Road, Portsmouth, £40,900 (recommended); John Hunt, Ltd., £462,500; Hawkins Bros. (Gosport), Ltd., £463,788; Jno. Croad, Ltd., £468,992; Frank J. Privett, Ltd., £470,308; Henry Jones and Son (Portsmouth), Ltd., £472,647; H. E. Collins, Ltd., £474,826; J. V. Figgins (Builders), Ltd., £475,880.

Alterations and additions to Rooms D4 and D5 of Chemistry Department at the College of Technology:—Payne Bros. (Portsmouth), Ltd., Fitzherbert Road, Farlington, Portsmouth, £4,500 (recommended); Jno. Croad, Ltd., £5,141; A. E. Porter and Son, Ltd., £5,177; Henry Jones and Son (Portsmouth), Ltd., £5,536.

Booking office, restaurant, etc., for Isle of Wight car ferry scheme:—Direct Labour, £15,367 (recommended); A. G. Figgins (Contracts), Ltd., £16,747; Enfin, Ltd., £17,329; John Hunt, Ltd., £17,560; Hawkins Bros. (Gosport), Ltd., £17,639; Jno. Croad, Ltd., £19,451.

Extension to changing rooms at Bransbury Park:—Enfin, Ltd., £3,169 (recommended); Payne Bros. (Portsmouth), Ltd., £3,296; Johns and Harris, £3,348.

Internal redecoration work at following schools: Northern Parade Junior Girls; Northern Parade Infants; Paulsgrove Junior Boys; Paulsgrove Junior Girls; and Paulsgrove East Infants:—Direct Labour, £1,076, £800, £1,136, £1,063, and £935, respectively; Penhale Road Junior Mixed and Penhale Road Infants:—Enfin, Ltd., £1,216 and £683; Paulsgrove West Infants:—Hostler and Smith, 27 Merthyr Avenue, Cosham, Portsmouth, £860; Portsdown Junior Boys, Portsdown Junior Girls, Portsdown Infants, and Westover Road Infants:—H. Jones and Son (Portsmouth), Ltd., 35 Aldwell Street, Portsmouth, £1,290, £1,284, £1,115, and £1,291; Wimborne Road Junior Boys, and Wimborne Road Junior Girls:—G. Winter and Sons, 70 Widley Road, Portsmouth, £763 and £804 (recommended).

**Reading, Berks.**—Internal redecoration at E. P. Collier Schools, for B.C.:—David Leslie (Contractors), Ltd., £2,488 (recommended).

**Rochdale, Lancs.**—Works in connection with smoke control in 337 dwellings at Kirkholme and Dicken Green, for B.C.:—J. Duncan (Oldham), Ltd., 15 Union Street, Oldham, £3,728.

**Southampton.**—Alterations and additions to the Institute of Education, for the University of Southampton:—H. Stevens and Co., Ltd., Millbank Street, Southampton. Estimated cost £49,547. Gutteridge and Gutteridge, architects, and Jung and Gear, quantity surveyors, both at 45 Westwood Road; Buckle and Partners, consulting engi-

neers, 2 Harrington Gardens, London, S.W.7. Work commenced.

**South Molton, Devon.**—Painting at Hugh Squier Avenue, for B.C.:—F. J. Boucher and Sons, £1,582 (recommended).

**Southport, Lancs.**—Exterior house painting: One hundred bungalows—Pinfold Lane estate; 117 houses—Russell Road estate; and 173 houses—Radnor Drive estate, for B.C.:—David Lesley (Contractors), Ltd., 20 Tithebarn Street, Liverpool, 2, £1,417, £1,948 and £1,697, respectively (recommended).

**Stockport, Cheshire.**—Following works, for B.C.: 11 and 10 garages at Brinnington, contract 48b, and Canal Bridge Farm estate, contract 8, respectively: Durrant and Co., Ltd., £1,405; metal windows for phase 1 of Dial Stone School extensions—Hills (West Bromwich), Ltd., Albion Street, West Bromwich, Staffs., £6,466 (recommended).

**Stocksbridge, Yorks.**—Painting of 212 houses, for U.D.C.:—D. A. Potter, Sheffield, £2,733.

**Sunderland, Dur.**—Painting works at following schools, for B.C.: Grange Park Secondary Modern and Infant Departments:—Thomas Fisher, 19 Amberley Street, Sunderland, £1,367; Stanfield Street Secondary Modern and Infant Schools:—A. Hector Grabham, Ltd., 21 Blandford Street, Sunderland, £1,129; West Southwick Secondary Modern and Infant Schools, St. Cuthbert's R.C. Junior and Infant Schools, Thomas Street Junior and Infant Schools, Barnes Infant, Junior and Senior Girls' and Boys' Departments and Hylton Red House Junior and Infant Schools:—Direct Labour, £1,969, £1,280, £1,950, £610 and £2,200, respectively (all recommended).

**Sunderland, Dur.**—Conversion of former chapel, Stockton Road and Olive Street, into shops, showrooms, etc., for Thomas Hill (Wearside), Ltd.:—Charles Tennet (Contractors), Ltd., 74 Church Road, Stockton-on-Tees.

Erection of training centre at Humbledon, for B.C. H. C. Bishop, borough architect:—James Prentice, Leeds Street, Sunderland, £67,325.

**Tain, Ross.**—Alterations at Town Hall, Stafford Street, for B.C. Geo. Gordon and Co., architects, 6 Queensgate, Inverness:—Alex Morrison, contractor, Station Road, Tain, £14,028 (accepted); Pat Munro (Alness), Ltd., £15,465; James Campbell and Son (Cast Stone), Ltd., £19,862. Work commencing Aug. 1.

**Tynemouth, Northumb.**—Erection of new premises for Lloyds Bank in Bedford Street and Percy Street, North Shields. George H. Gray and Partners, architects, Camden Street, North Shields:—R. Anderson, Ltd., Stanmore Road, Newcastle upon Tyne.

**Wanstead and Woodford, Essex.**—External painting of 26 houses at Purleigh Avenue, for B.C.:—Clemens Bros., Ltd., £940 (recommended).

**Winchester, Hants.**—Second instalment of extensions to Peter Symond's Grammar School, for Co. E.C.:—Hawkins Bros. (Gosport), Ltd., Westfield Road, Gosport, £51,731 (recommended).

**Workington, Cumb.**—Following works, for B.C.: Repainting of 100 B.I.S.F. houses and houses on various estates:—G. W. Sanderson, Cadman Street, Workington, £2,000, and Maryport Co-operative Society, Station Street, Cockermouth, £4,332, respectively (recommended).

Renewal of windows to houses, Salterbeck:—J. W. Bowe, Clay Flatts, £6,700 (recommended).

## DEMOLITION

**Dewsbury, Yorks.**—Demolition of the former Zion Methodist Chapel in Wellington Road, for B.C.:—Ibbittson Brothers, Batley, £550 (recommended).

**Doncaster, Yorks.**—Demolition of certain buildings at Belle Vue stables, for B.C.:—H. Bratley and Co., Doncaster, £450 (recommended). Firm retaining all materials for disposal.

**Dudley, Worcs.**—Demolition of properties, 33-38 King Street, for B.C.:—P. Mitchell and Sons, Birmingham, £90 (recommended).

**Keighley, Yorks.**—Demolition of 21 houses off West Lane, for B.C. R. C. Gibson, borough engineer:—A. Ogden and Sons, Ltd., 40 Bondgate, Otley.

**Kidsgrave, Staffs.**—Demolition of certain houses which are subject to Demolition Orders under the Housing Acts, for U.D.C.:—Park Hall Demolition Co., Lascelles Street, Tunstall, Stoke-on-Trent, £747 (accepted); George Baskerville, £1,250; Potteries Demolition Co., Ltd., £1,100; P. Daniels, £2,000; R. Sutton, £950; Talke Slag and Ash Co., £1,000. Work commenced.

**Stockport, Cheshire.**—Demolition of 1-7 and 9 Victoria Park and 35 Dialstone Lane,

together with outbuildings, for B.C.:—J. Stephens and Co., Harwood Road, Heaton Moor, Stockport, £575 (recommended).

#### ELECTRICAL

**Barrow-in-Furness, Lancs.**—Electrical installation at Drumard House Training Centre, for B.C.:—Hartley and Bramhall, Ltd., Hindpool Road, Barrow-in-Furness, £787 (recommended).

**Billingham, Dur.**—Electrical installation at new day school, for Co. E.C.:—Edgar Phillips, Ltd., West Hartlepool, £1,881.

**Carlisle, Cumb.**—Electrical work for new admission unit and two convalescent villas at Garlands Hospital, for Newcastle Regional Hospital Board:—G. Bowman, Ltd., Carlisle, £20,848.

**Dorchester.**—Electrical rewiring of 76 Council houses, for B.C.:—Roger and Dawes, Ltd., Handel House, High Street West, Dorchester, £1,357 (recommended).

**Felling, Dur.**—Electrical installations at Bill Quay County and Modern School, for Co. E.C.:—Storey and Crowe, Ltd., Crawcrook, £1,655.

**Sheffield.**—Electric power supply to central boilerhouse at City General Hospital, for Regional Hospital Board:—Volt Works, Co., Worksop Road, Sheffield, 9, £4,375 (recommended).

**Stockport, Cheshire.**—Electrical installation in 59 dwellings, contract 4, York Street redevelopment, for B.C.:—Piggott and Whitefield, Ltd., 9 Cooper Street, Stockport, £4,618 (recommended).

**Sunderland, Dur.**—Electrical work for additions to maternity hospital, for Newcastle upon Tyne Regional Hospital Board:—R. H. Patterson, Newcastle upon Tyne, £1,192.

**Swinton and Pendlebury, Lancs.**—Electrical installations at Homes for the Aged, Moorfield, for B.C.:—N. A. Cockcroft, 277 Church Road, Flixton, Urmston, £1,296 (recommended).

**Tonbridge, Kent.**—Installation of electric wiring in 11 blocks of four one-bedroom flats at Pembury, Hildenborough and Hadlow, for R.D.C. H. W. Clark, engineer and surveyor:—G. P. Cree, Ltd., 1 St. Stephen Street, Tonbridge, £1,144. Work commencing Oct.

#### FENCING

**Dewsbury, Yorks.**—Supply and fixing of plastic covered chain link fencing to wheelwright Grammar School, for Boys, for B.C.:—R. W. Fletcher, Ltd., Nuneaton, £609 (recommended).

**Workington, Cumb.**—Replacement of fences and Gates, Salterbeck estate, for B.C.:—

Border Engineering Contractors, Ltd., 125 Queen Street, Whitehaven, £3,822 (recommended).

#### GAS AND WATER SUPPLY

**Amesbury, Wilts.**—Regional water supply contract II, Shrewton area, for R.D.C., comprising the construction of a 250,000-gallon service reservoir in reinforced concrete, and for the laying of approximately 2½ miles of 8in. diameter spun-iron water main, approximately half-mile of smaller diameter mains, and incidental works. Lemon and Blizard, consulting engineers; Telford House, Hulse Road, Southampton:—James and Crockerell, Ltd., Durrington, Salisbury, Wilts. Work commencing August.

**Bordon, Cumb.**—Laying of 3,180yd. of 3in. water main at Wetheral in connection with the Low House water supply scheme, for R.D.C. W. Skerry, surveyor:—H. Cartner and Son, 1 West Tower Street, Carlisle.

**Brighton, Sussex.**—Following, for B.C.: Construction of the Swan (Palmer) reservoir:—S. M. Tidy (Public Works), Ltd., 161 Preston Road, Brighton, £62,667 (accepted); A. E. Farr, Ltd., £74,692; Howard Farrow, Ltd., £64,949; Peter Lind and Co., Ltd., £65,339; J. T. Mackley and Co., Ltd., £76,660; Mears Bros. (Contractors), Ltd., £69,012; James Miller and Partners, Ltd., £67,486; Shellabear Price, Ltd., £65,548; Vibrated Concrete Construction Co., Ltd., £72,904.

Construction of the Sompting main, from Sompting pumping station to Sompting bypass:—A. L. J. Davis (Public Works), Ltd., Whyke, Chichester, £2,987 (accepted); E. W. Avent, Ltd., £4,337; McGinty Construction Co., Ltd., £4,330; J. Murphy and Sons, Ltd., £3,858; William Press and Son, Ltd., £3,437; Surface Maintenance Services, Ltd., £10,615; S. M. Tidy (Public Works), Ltd., £4,146; Tilbury Construction Co., Ltd., £3,627.

**Inverness-shire.**—Supply and laying of about seven miles of 4in., 3in., and 2in. diameter piping at Skallary, Isle of Barra, for C.C. H. D. F. Forsyth, county water engineer:—A. D. Mitchell and Sons, Ltd., 5-9 New Row, Perth (recommended).

**Ross and Cromarty.**—Laying and jointing of approximately 9½ miles of 4in. to 1½in. diameter asbestos-cement water mains, with construction of intakes and two mass concrete storage reservoirs at Inversdale in the parish of Gairloch, for C.C.:—I. Campbell and Son (Building Contractors), Ltd., Inverness. Work commencing end of month.

**Rugby, War.**—Descaling of approximately 1,320yd. of 3in. pipe in Overslade Lane, for B.C.:—Mercol Descaling Co., Ltd., Sheffield, 5s. 10d. per yd. (recommended).

**St. Neots, Hunts.**—Three Shire water tower, for R.D.C., comprising the construction of a reinforced concrete water tower, capacity 75,000 gallons, height approx. 60ft., at Covington. Pick, Everard, Keay and Gimson, consulting engineers, 6 Millstone Lane, Leicester:—F.C. Construction Co., City Road, Derby, £14,067. Work commencing Aug.

**Stockport, Cheshire.**—Sinking of boreholes in connection with the Goyd Valley scheme, for B.C.:—Boyle Bros., £1,115 (recommended).

#### HEATING AND VENTILATING

**Carlisle, Cumb.**—Mechanical engineering services at the Garlands Mental Hospital, for Newcastle upon Tyne Regional Hospital Board:—Selborne Engineering Co., Ltd., Selborne Gardens, Newcastle upon Tyne, £61,222.

**Deal, Kent.**—Installation of an oil-fired boiler at the Town Hall, for B.C.:—M. W. Longley, Ltd., 10 Cheriton Gardens, Folkestone, £1,205 (recommended).

**Hove, Sussex.**—Dismantling and removal of the existing laundry boiler at the King Alfred, Hove, and the installation of a new multi-water tube vertical steam boiler, suitable for use with the existing heavy oil burner and equipment, for B.C.:—Holloways (Engineers), Ltd., Shoreham-by-Sea, £609.

**Nottingham.**—Development of boiler plant at Aston Hall, Aston-on-Trent, for Sheffield Regional Hospital Board:—Danks of Nether-ton, Ltd., 22 Bridge Street, Manchester, £13,695 (recommended).

**Nottingham.**—Ventilating plant for operating theatre at Eye Hospital, for Sheffield Regional Hospital Board:—Ashwell and Nesbit, Ltd., Barkby Lane, Leicester, £3,017 (recommended).

**Portsmouth.**—Conversion of the boiler plant at Great Salters Nursery to oil firing, for City Council:—C. W. Palmer and Sons, Ltd., 43 Copnor Road, Portsmouth, £933 (recommended); Associated British Combustion, Ltd., £1,081; Southey, Ltd., £1,088; Mumford Bailey and Preston, Ltd., £1,059; Burgess and Co. (Engineers), Ltd., £1,128; Brightside Heating and Engineering Co., £1,134; Wardown Heating and Manufacturing Co., Ltd., £1,250; Reynolds of Southsea, £1,264.

#### HOUSING SCHEMES

**Ashbourne, Derbyshire.**—Following works, for U.D.C.: Park Land housing contract II, comprising 12 two-bedroom flats at Brookside, Ashbourne; Park Land roads and sewers contract, extension II, part five, Brookside, comprising approx. 550 sq. yd. of reinforced concrete carriageway, 169 lin. yd. of kerbing, 420 sq. yd. of paving, grass

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verges, 6in. soil and surface water drains, etc. P. W. Thornley, engineer and surveyor:—J. H. Fryer, Ltd., Great Northern Road, Derby.

**Ashton-under-Lyne, Lancs.**—Forty one-bedroom flats at Vicarage Crescent, for B.C.:—Homeville Co., Ltd., Craufurd Rise, Maidenhead, Berks. (recommended). Estimated cost £49,041.

**Camelford, Corn.**—Construction of the following, for R.D.C.: (Contract 147) One block of four houses, Camelford; (148) one block of four houses, St. Teath; (149) one block of five bungalows, Tintagel. R. R. Haylett, surveyor:—Contracts 147 and 148 E. Dennis and Son, Ltd., The Warrens, Camelford, £7,576 and £7,559, respectively; (149) G. Climo and Son, Treknock, Tintagel, £7,441.

**Chester.**—Four bungalows and eight houses at Arrowcroft Road, Guilden Sutton, for R.D.C. T. C. R. Eaton, architect:—J. Roddy, 14 Bridge Street Row (West), Chester, £13,886 (accepted); A. Halliwell and Son (Chester), Ltd., £15,369. Work has commenced.

**Clackmannanshire.**—Forty houses at the Tullibody housing development, for C.C.: Mason and Brick — Alex. Todd, 71 Deer Park, Sauchie, by Alloa, £31,229; carpenter and joiner — Matthew Primrose and Co., 52 Abbey Road, Stirling, £15,458; glazier — George G. Kirk, Ltd., 51 Upper Craigs, Stirling, £231; plaster — David Robertson and Sons (Denny), Ltd., 37 Herbertshire Street, Denny, £4,220; tiler and roughcast — John Robertson and Sons (Slater's), Ltd., 21 Campbell Street, Dunfermline, £3,169; plumber — John McKenzie, 34 Grant Street, Alloa, £6,160; electrical — A. M. Todd, Stirling Street, Tilicoultry, £2,202.

**Crayford, Kent.**—Two hundred and sixty-three dwellings, three laundries, 92 garages, roads and playgrounds, for U.D.C.: — George Wimpey and Co., Hammersmith Grove, London, W.6. £587,000.

**Cricklade and Wootton Bassett, Wilts.**—Ten houses and 28 bungalows (brick) Cricklade Purton and Broad Town, for R.D.C., including site and substructures, drains, water services, fences, carriageway and footpath works. J. C. Grindley, engineer and surveyor; Broad Town and Purton:—Wain Bros., Swindon Road, Stratton St. Margaret,

£11,112 and £24,555, respectively; Cricklade:—Floyd Agar and Co., Ltd., Church Street, Sherston, Malmesbury, Wilts., £31,186.

**Darlington, Dur.**—Fifty houses on the Firth Moor estate, for B.C. E. A. Tornbohm, borough architect:—Direct Labour, £74,653.

**Deudraeth, Merioneths.**—Four flats, 115 houses and eight bungalows, for R.D.C.:—Gregory Housing, Ltd., 21 Farncombe Road, Worthing, Sussex.

**Dorchester.**—Eighteen dwellings and a shop with living accommodation at Poundbury housing estate, for B.C.:—Herbert W. Tily and Son, Ltd., £30,013 and £4,569, respectively (recommended).

**Dover, Kent.**—Erection of 20 housing units at St. David's Avenue, Aycliffe, together with site and ancillary works, for B.C.:—G. Lewis and Sons (Dover), Ltd., Widred Road, Dover, £38,370. Work commencing Sept.

**Easington, Dur.**—Nine houses at Murton, for R.D.C. R. R. Lumsden, surveyor:—Direct Labour, £13,464.

**Friern Barnet, Middx.**—Seven houses, 10 bungalows, for U.D.C.:—Gregory Housing, Ltd., 21 Farncombe Road, Worthing.

**Kensington.**—Erection of eight Georgian-type houses at South Bolton Gardens, London, S.W.5. E. A. Stone, Toms and Partners, architects, 29 South Audley Street, London, W.1.—Kyle, Stewart (Contractors), Ltd., Wembley Park Drive, Wembley, Middx. Estimated cost £70,000.

**Leek, Staffs.**—Sixty-six flats, for U.D.C.:—Gregory Housing, Ltd., 21 Farncombe Road, Worthing, Sussex.

**Market Harborough, Leics.**—Thirty-one houses, for U.D.C.:—Gregory Housing, Ltd., 21 Farncombe Road, Worthing, Sussex.

**Normanton, Yorks.**—Thirty-eight houses in Wakefield Road, for U.D.C.:—Fell Construction Co., Ltd., 20-30 Lawfield Lane, Wakefield, £68,626 (subject to Ministry approval).

**Portsmouth.**—Following works, for City Council: Seventeen flats and maisonettes at St. Paul's Church site:—Henry Jones and Son (Portsmouth), Ltd., 35 Aldwell Street, Portsmouth, £41,319 (recommended); A. E. Porter and Son, Ltd., £41,895; Basford and Sons (Contractors), Ltd., £42,571; E. and A. Springins, Ltd., £42,893.

Six flats and three garages at Alhambra Road, Portsmouth, Gosport and District Builders' Guild, Ltd., 28a Kingston Road, Portsmouth, £11,812 (recommended); Enfin, Ltd., £12,033; E. and A. Springins, Ltd., £12,204; H. Jones and Son (Portsmouth), Ltd., £12,230; Cortis and Hankins, Ltd., £12,311; Johns and Harris, £12,619; Basford and Sons (Contractors), Ltd., £12,817; A. E. Porter and Son, Ltd., £13,266; W. J. Waldrone, £13,970.

Twelve bungalows, six flats and six garages at Karen Avenue, Drayton:—Portsmouth, Gosport and District Builders' Guild, Ltd., £37,420 (recommended); J. H. Day (Builders), Ltd., £37,954; H. Jones and Son (Portsmouth), Ltd., £40,359; E. and A. Springins, £41,830; Cortis and Hankins, Ltd., £41,908; A. E. Porter and Son, Ltd., £42,118; Basford and Sons (Contractors), Ltd., £42,305; Johns and Harris, £42,678.

Eighteen houses and six garages at Prince George Street:—A. E. Porter and Son, Ltd., 57 Church Street, Portsmouth, £51,895 (recommended); H. Jones and Son (Portsmouth), Ltd., £52,018; Basford and Sons (Contractors), Ltd., £53,121.

**Rawtenstall, Lancs.**—Thirty-two flats and 30 bungalows, for B.C.:—Gregory Housing, Ltd., 21 Farncombe Road, Worthing.

**Rochdale, Lancs.**—Eight dwellings on the Kirkholme estate, for B.C.:—Roy and Partners, Ltd., 66 Blackfriars Road, Manchester, 3 (extension of contract, recommended, subject to Ministry approval).

**Rothwell, Yorks.**—Erection of houses for sale on the Styebank Lane site, for U.D.C.:—F. Clough, Rein Road, Morley, £47,996.

**Southwick, Sussex.**—Erection of eight houses, for U.D.C.:—Gregory Housing, Ltd., 21 Farncombe Road, Worthing.

**Stockport, Cheshire.**—Reinforced concrete piling for York Street redevelopment, contract 4, for B.C.:—Holmpress Piles, Ltd., Leeds Road, Hull, £2,457 (recommended).

**Wath-upon-Dearne, Yorks.**—Forty three-bedroom and 20 two-bedroom houses, for U.D.C. W. E. Haigh, engineer and surveyor:—Bramall and Ogden, Gore Hill, Wath-upon-Dearne, £79,584. Work commencing Aug. 1.

**West Hartlepool, Dur.**—Eighty-eight dwellings in the Central area, for B.C. A. G. Sinclair, borough architect:—G. M. Pear-



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son and Son, Front Street, Hetton, Co. Durham.

**Wigan, Lancs.** — One hundred and sixty-five houses at Marsh Green, for B.C.:—Direct Labour, £227,638.

**Wivenhall, Staffs.** — Twenty-eight dwellings and seven shops with maisonettes at New Street, Portobello, 16 bungalows in traditional construction at Wood Lane, and 72 dwellings at Straight Road, Short Heath, for U.D.C.:—Sir Alfred McAlpine and Son, Ltd., 49 Waterloo Road, Wolverhampton. Work commencing this month.

**Workington, Cumb.** — Eight bungalows for aged persons, for B.C.:—Homeville Co., Ltd., Craufurd Rise, Maidenhead, Berks. (subject to Ministry approval).

#### MATERIALS AND SUPPLIES

**Southport, Lancs.** — Supply of traffic signs, for B.C.:—Gowshall, Ltd., Oldbury, near Birmingham, £1,528.

#### PLANT AND MECHANICAL TRANSPORT.

**Birmingham.** — Supply of following, for City Council: Bulk loading refuse collection:—Shelvoke and Drewry, Ltd., Letchworth, Herts; dual tip refuse collection vehicle:—Rootes, Ltd., London, W.10; dustless refuse collection vehicles:—Glover, Webb and Liversidge, Ltd., London, S.E.1, and The Eagle Engineering Co., Ltd., Warwick.

**Burton-upon-Trent, Staffs.** — Supply of a Bedford Lacre sweeper fitted with diesel engine, the old Lewin sweeper being taken in part exchange, for B.C.:—R. W. Kenny, Ltd., Lichfield Street, Burton-upon-Trent. £2,723 (recommended).

**Newport, Mon.** — Supply of the following, for B.C.: One J.C.B.4 tractor excavator:—Wm. Lewis (Agricultural House), Ltd., 372 Newport Road, Cardiff, £2,193; one S.V.78 air compressor:—H. Richards and Co., Ltd., Rodney Road, Newport, £729 (recommended).

**Plymouth.** — Supply of following, for City Council: Six refuse collection vehicles, 18/27 cu. yd. capacity, hand loaded:—Wadham Bros., Ltd., Waterlooville, Portsmouth, £15,904 (recommended); Gordon Motors, Ltd., £16,020; Haigs Motor Co., Ltd., £16,021; J. H. Sparshatt and Sons, Ltd., £16,044.

Three 20/30 cu. yd. capacity collection vehicles with bin lift:—J. H. Sparshatt and Sons, Ltd., London Road, Hilsea, Portsmouth, £8,605 (recommended); Gordon Motors, Ltd., £8,685; Haigs Motor Co., Ltd., £8,684; Wadham Bros., Ltd., £8,624.

Two Fordson Dexta diesel tractors; three Ransomes 30in. multi mowers as cylindrical mowers; 12 Ransomes gang mower units, MK10, with pneumatic tyres; two Ransomes quintuple sports cutter frames, arrangement "A"; and one Solent power-driven soil-screening or sifting machine:—T. Parker and Sons, Ltd., Worcester Park, Surrey, £27,000 (recommended).

**Southport, Lancs.** — Supply of model I.G. 40 Simon hydraulic platform, mounted on a Bedford 5-ton diesel chassis, and a Bedford 5-ton, short wheel-base tipping wagon, fitted with a Bedford six-cylinder diesel engine and a special body, tyres and equipment, for B.C.:—Southport Engineering Co., Ltd., 7 King Street, Southport, £3,208, inclusive of delivery charges and allowing for fleet owner's discount and £1,206, including a Bedford 2-ton tipping wagon in part exchange, respectively (recommended).

**Sunderland, Dur.** — Supply of a Weatherill S2 model industrial loading shovel, fitted with

diesel engine, ½ cu. yd. bucket and ancillary equipment, for B.C.:—R. H. Patterson and Co., Ltd., Newcastle upon Tyne, £1,372 (this being the net amount after deducting an allowance of £200 for purchase of Corporation's existing loading shovel).

**Swinton and Pendlebury, Lancs.** — Supply of diesel tractor, for B.C.: Burgess Bros., Haydock, £525 (recommended).

**Wanstead and Woodford, Essex.** — Supply of 2½-ton lorry, for B.C.:—Ray Powell, Ltd., 392-4 Eastern Avenue, Ilford, £1,011 (recommended).

#### PLAYING FIELDS, PARKS, ETC.

**Ashton-under-Lyne, Lancs.** — Development of playing fields and fencing for the Hurst Methodist (Controlled) School:—C. A. Wilding and Co., Ltd., Hill Top Lane, Kimberworth, Rotherham, £5,071.

**Bristol.** — Laying out as an amenity area land between Ridingleaze and Long Cross, Lawrence Weston, for City Council:—Hawthorns (Bristol), Ltd., Stoke Bishop, Bristol, 9, £2,212, and Direct Labour, £883 (recommended).

**Dewsbury, Yorks.** — Construction of additional playground at Victoria Secondary School, for B.C.:—C. and F. Construction Co., 99 Leeds Road, Newton Bar, Wakefield, £5,696 (recommended).

**Eccles, Lancs.** — Drainage and foundation work to children's playgrounds at Eccles Recreation Ground, Schofield Playing Fields and Winton Park, for B.C.:—Wilson and Wilkinson, Ltd., 102 Bolton Road, Pendleton, Salford, 6, £4,818 (recommended).

**Keighley, Yorks.** — Shaping of approximately three acres of marley tip and soiling 8in. thick, for B.C. The soil to be excavated from the Marley sewage works lands which adjoin. R. C. Gibson, borough engineer:—W. Elliott and Co., Ltd., 67 Wetherby Road, York, £791.

**Portsmouth.** — Layout of the site and the preparation of playing fields at the new premises for Court Lane Modern School at Grove Road, Drayton, for City Council:—Messrs. Sporecon, Southampton, £8,705 (recommended); Kinman (Contractors), Ltd., £9,568; En-Tout-Cas Co., Ltd., £10,110; E. Doe and Sons (Contractors), Ltd., £11,457; F. G. Garrett and Son, £13,192; Surface Maintenance Services, Ltd., £13,894.

**Sevenoaks, Kent.** — Laying out of a playing surface, approx. 5,000 sq. yd. in area, at Chalk Pit Hollow, Otford, for R.D.C. N. W. Cole, engineer and surveyor:—R. Mitchell, 38 Shortlands Road, Bromley, £909 (accepted); E. Doe and Sons (Contractors), Ltd., £1,006; R. Marchant and Sons, Ltd., £1,065; Douglas-Hamilton (Contractors), Ltd., £1,089; Walter Smith (Contractors), Ltd., £1,397; Crouch and Leach, Ltd., £1,429; Cull Bros., Ltd., £1,490; Ransom and Banks, Ltd., £1,585; Sportworks, Ltd., £1,653. Work commencing Aug.

#### RAILWAY ENGINEERING

**British Railways.** — Following contracts placed:

Eastern Region:

Alterations to parcels, ticket and inquiries offices, alterations to staircases to up and down platforms, repairs and redecorations to brick arches and provision of external pavings to front forecourt and canopy at Chelmsford Station:—Holliday and Greenwood, Ltd., 11 Buckingham Palace Gardens, London, S.W.1.

Construction of crane track at Canning Town Wharf and construction of crane

track and renewal of river wall at Blackwall (pepper warehouse) Wharf:—Coffin and Co., Ltd., 25 Craven Street, Strand, London, W.C.2.

Earthworks, stores buildings, foundations to messroom and external works at Doncaster (Decoy) new permanent way depot:—Charles R. Price, Barnsley Road, Doncaster.

Construction of concrete underbridge 1001E and steel dive underbridge 1001D and earthworks within the confines of the bridges, east of Colchester Station:—The Cementation Co., Ltd., P.O. Box 151, 20 Albert Embankment, London, S.E.11.

#### North Eastern Region:

Renewal of the roof of bay 2 in the brass foundry at North Road Works, Darlington:—E. Davis (Fixers), Ltd., York.

Construction of a new signal box at Sudforth Lane, Kellingley:—W. Irwin and Co., Ltd., Leeds.

Provision of piled foundations for the District Offices at Leeds City Station:—Holmpress Piles, Ltd., Hull.

Supply and spreading of quarry filling at Newthorpe, near South Milford:—J. Hinckcliff and Son, Ltd., South Elmsall.

Painting of Hammerton Street Diesel Depot, Bradford, and Adolphus Street (Bradford) Goods Station:—Arundel (Contractors), Ltd., Bradford.

Supply of mechanical equipment for the Chief Civil Engineer's Department for construction of new marshalling yards:—Consolidated Pneumatic Tool Co., Ltd., Gateshead.

Painting of certain stations and buildings in the Darlington, Gateshead and Newcastle areas:—W. Latimer and Co., Ltd., Newcastle.

#### RIVER AND FLOOD PREVENTION WORKS

**Durham.** — Diversion of the River Team in connection with construction of a new railway marshalling yard at Lamesley, for British Railways:—Derek Crouch, Ltd., Birtley, Co. Durham.

#### ROAD, BRIDGES AND SITE WORKS

**Amesbury, Wilts.** — Reconstruction of paths to 64 houses at Amesbury, Durnford and Durrington, for R.D.C., comprising laying approximately 1,350 sq. yd. of in-situ concrete paving, 3in. thick, and other incidental works. J. I. Hind, engineer and surveyor:—W. J. Richards and Son, Salisbury. Work about to commence.

**Boldon, Dur.** — Making-up of part of a private street in Woodlands Road, Cleaton, for U.D.C. J. T. Edmondson, surveyor:—Edwin Clarkson, Ltd., Station Approach, East Boldon, £5,564. Work commencing Aug. 1.

**Bristol.** — Construction of the Stratton Street service court, for City Council:—Direct Labour (recommended). Estimated cost £3,750.

**Carmarthenshire.** — Widening at Commissioners Bridge, Kidwelly, on the Carmarthen-Llanelli road, A.484, for C.C. J. L. Richards, county engineer and surveyor:—D. Glyndwr Griffiths, Holloway, Kidwelly.

**Dewsbury, Yorks.** — Private street works in Stockhill Street, including the laying of a surface water sewer and the construction of a manhole on the foul sewer, for B.C.:—Ace Asphalts, Ltd., Dewsbury, £5,521 (recommended, subject to Ministry approval).

## FENCING

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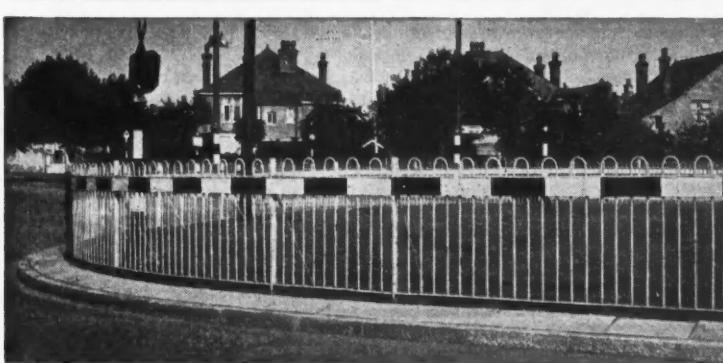
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**Doncaster.**—Following works, for B.C.: Carriageway surfacing of Ellers Road:—William Prestwich and Sons, Ltd., Dronfield, £1,864; construction of roads and sewers at Church Lane, Warmsworth:—John Hadfield and Sons, Ltd., Effingham Street, Sheffield, 4, £4,175 (both recommended).

**Dudley, Wors.**—Following works, for B.C.: Resurfacing footpaths in parks and cemetery, 1960-61:—Road Surfacing Co., Ltd., 68 Hagley Road, Edgbaston, Birmingham, £1,360; first stage of roads and sewers for the Flood Street comprehensive development area:—Mee Mulrey and Co., Ltd., 365 Olton Boulevard East, Olton, Birmingham, 27, £57,390 (recommended).

**Eastbourne, Sussex.**—Following works, for B.C.: Supply and application by pressure tank sprayer of hot B.S.S. tar, including the spraying of the Corporation's granite chippings as part of this year's road tarring programme:—Johnson Bros. (Aylesford), Ltd., Vale Road, Tonbridge, Kent, tar, 6s. 2d. per super. yd., tar with 10 per cent. bitumen, 6s. 7d. per super yd. (recommended).

Seaside/Bourne Street improvement and road and sewers at Brampton Road trading estate:—Direct Labour, £10,700 and £15,000, respectively (recommended).

**Eccles, Lancs.**—Following works, for B.C.: Road and sewer works for development of New Hall Farm:—Wilson and Wilkinson, Ltd., 102 Bolton Road, Pendleton, Salford £3,117; surfacing works to Eccles Recreation Ground, Schofield Playing Fields and Winton Park—W. Snape and Sons, Ltd., Clifton House, Clifton Road, Eccles, £4,697; footpath reconstruction and carriageway resurfacing works in Canal Bank and Canal Side:—M. C. Kennedy and Co., Ltd., Manchester, £6,006, and Neuchatel Asphalte Contracting Co., Ltd., Whit Lane, Pendleton, Salford, £4,608, respectively.

Making-up Cavendish Road, Bedford Road and Dovedale Avenue:—Wilson and Wilkinson, Ltd., £5,282, and M. C. Kennedy and Co., Ltd., Manchester, £2,236 and £9,893, respectively (all recommended).

**Ellesmere Port, Ches.**—Construction of roads and sewers for the town shopping centre,

contract 290, for B.C., comprising 21,200 sq. yd. of carriageway, 8,200 sq. yd. of footpaths and 2,500 lin. yd. of sewers varying from 24in. to 6in. diameter. Cecil W. Davies, borough engineer and surveyor:—J. W. Flather, Ltd., Bleak House, Ellesmere Port, £121,343 (accepted); Sir Robert Lloyd and Co., Ltd., £125,258; Tunney (Engineering), Ltd., £129,939; D.C.M. Contractors (Liverpool), Ltd., £134,444.

**Felixstowe, Suffolk.**—Making-up of (1) part of Fairfield Avenue and (2) part of St. George's Road, for U.D.C. A. H. Pavitt, engineer and surveyor:—East Anglian Roadstone and Transport Co., Ltd., Norwich, (1) £3,241 and (2) £3,079 (accepted); and May Gurney and Co., Ltd., (1) £3,304 and (2) £3,571; Roadworks (1952), Ltd., £3,303 and (2) £3,352; Rogers Bros., Ltd., (1) £3,542 and (2) £3,724. Work commencing August.

**Folkestone, Kent.**—Resurfacing of classified roads and incidental work during 1960-61, for B.C.:—Chittenden and Simmons, Ltd., Ditton Place, Larkfield, Maidstone (recommended).

**Haltemprice, Yorks.**—Improvement of Mill Lane, Kirkella, for U.D.C., comprising 700 lin. yd. kerbing and channels, 4,000 super. yd. tarmacadam roadwork, 700 super. yd. tarmacadam footpath and 90 lin. yd. 9in. diameter sewer, and incidental works. R. B. Heseltine, engineer and surveyor:—G. Allenby, Hull (accepted provisionally).

**Keighley, Yorks.**—Making-up Daleside Road and Newlyn Road with concrete carriageways and flagged footways, for B.C. R. G. Gibson, borough engineer:—Direct Labour.

**Kendal, Westmor.**—Construction of private street works in Mintsfeet Road, for B.C.:—W. H. Ainsworth and Co., Ltd., Sandgate, Sandylands, Kendal, £3,146 (recommended).

**Kilkeel, Down.**—Surface tarring approximately 16,700 super. yd. of carriageways and footways and other ancillary work in the district, for U.D.C.:—Aughrim Quarries, Aughrim, Kilkeel, Newry, Co. Down, £950.

**Newport, Mon.**—Grouting of road slabs at Risca Road, for B.C.:—Cementation Co., Ltd., 20 Albert Embankment, London, S.E.11, estimated cost £1,000 (recommended).

**Penzance, Corn.**—Making-up of Kenstella Road, Elm Way, and the road off Kenstella

Road, Newlyn, for B.C.:—A. H. Dingle, Ltd., Seton, Redruth, Cornwall, £2,480 (accepted); A. Dennis and Son, Ltd., £2,730; Northcots of Exeter, £3,712; E. Thomas and Co., Ltd., £3,473; Venn Bros. (Cornwall), Ltd., £3,046. Work to commence September.

**Reading, Berks.**—Following, for B.C., Resurfacing of playgrounds in primary and secondary schools during 1960-61:—Constable Hart and Co., Ltd., North Circular Road, London, N.W.2, £4,021; street improvement works at Tamarisk Avenue:—C. and R.B. Construction (Southern), Ltd., 111 Armour Road, Tilehurst, Reading, £4,289; site preparation works at The Laurels estate:—Tilbury Construction Co., Ltd., Ruscombe, Twyford, Reading, £30,261 (all recommended).

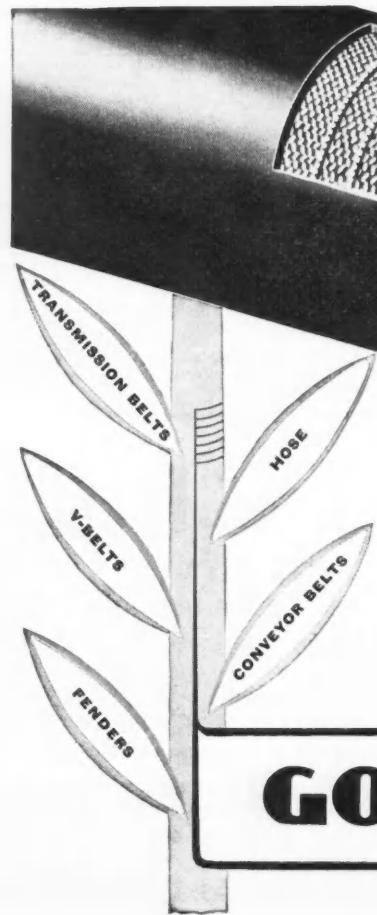
**Rotherham, Yorks.**—Reconstruction of Whybourne Terrace, Whybourne Grove, Portland Terrace, the total length of which is 210 lin. yd. for B.C. E. J. Mansen, borough engineer:—North Lonsdale Tarmacadam, Ltd., Sheffield, £3,652.

**Rugby, War.**—Resurfacing with hot asphalt, cold asphalt and bitumen macadam of approximately 37,000 sq. yd. of carriageway and 14,000 sq. yd. of footway, etc., in the borough, for B.C.:—Limmer and Trinidad Lake Asphalt Co., Ltd., Birmingham, £17,886 (recommended).

**Sevenoaks, Kent.**—Repairs to Hale Lane, Otford, for R.D.C. N. W. Cole, engineer and surveyor:—Loaland, Ltd., Little Preston, Aylesford, Kent, £940 (accepted, subject to Ministry approval); R. Marchant and Sons, Ltd., £1,053; Arnold and Nathan, Ltd., £1,054; Walter Smith (Contractors), Ltd., £1,225; Fordyce Bros., £1,325; Ransom and Banks, £1,441; Kaymat, Ltd., £1,656. Work commencing Sept.

**Shorne, Kent.**—Construction of drive in hardcore and tarmacadam, together with cold bitumen spraying and gravel chip dressing and kerb work at new bungalow, Pear Tree Lane, for Baker and Battershill, Ltd.:—Hodsons, Ltd., 17 Wrotham Road, Gravesend.

**Southport, Lancs.**—Construction of roads for development of land at Ainsdale, south of proposed Aged Persons' Home, including roadworks to Meadow Lane, from its junction with Liverpool Road to its junction with Sandbrook Road, for B.C.:—Direct



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**Sunderland, Dur.**—Kerb, flagging and carriage-way works, Carley Road, near Thompson Park, for B.C.:—Direct Labour, £1,242 (recommended).

**Stockport, Ches.**—Following works, for B.C.: Final surfacing of footpaths at Offerton and Brinnington neighbourhood units:—M. C. Kennedy and Co., Ltd., £5,775; making-up St. James' Road group:—M. J. Finn, 43 Lynton Avenue, Manchester, 8, £11,136 (recommended).

**Wanstead and Woodford, Essex.**—Following works, for B.C.: Construction of access road, hardstanding and ancillary works at Finchingsfield Avenue:—J. King, £1,691; roadworks at St. Judes Vicarage Road: Waywarden, Ltd., 215 Forest Road, London, E.17, £921 (recommended).

**Whaley Bridge, Derbys.**—Surface dressing of approximately 16,000 super. yd. of carriage-ways, for U.D.C. A. McLane, surveyor:—S. Sutcliffe and Son, Mytholmroyd, Yorks, 6.47d. per sq. yd. (accepted); N. E. Box and Co., Ltd., 6.75d. per sq. yd.; W. and J. Glossop, Ltd., 6.81d. per sq. yd.; Val de Travers Asphalte, Ltd., 6.91d. per sq. yd.

**Willenhall, Staffs.**—Construction of roads and sewers for housing site, Straight Road, Short Heath, for U.D.C.:—Sir Alfred McAlpine and Son, Ltd., 49 Waterloo Road, Wolverhampton. Work commencing July 25.

**Wirral, Ches.**—Making-up of a section of Hazel Grove, Irby, for U.D.C. E. Mellor, engineer and surveyor:—W. E. Parsons and Co., Ltd., Victoria Road, Ellesmere Port.

**Workington, Cumb.**—Surfacing of carriage-ways and footpaths, Moorclose housing estate, for B.C.:—Eden Construction Co., Ltd., English Damside, Carlisle, £4,791 (recommended).

#### SEWERAGE, SEWAGE AND REFUSE DISPOSAL

**Ashton-under-Lyne, Lancs.**—Provision of a new brook course alongside the existing brook course at Smallshaw, for B.C.:—C. V. Buchan and Co., Ltd., Smallshaw Lane, Ashton-under-Lyne (extension of contract, recommended). Estimated cost £1,500.

**Barrow-in-Furness, Lancs.**—Main sewer extension to third development of the North Walney housing estate, for B.C.: Butterworth and Partners, Ltd., Langley Mill, Nottingham, £20,960 (recommended).

**Basingstoke, Hants.**—Construction of Victory Square sewage pumping station, for B.C.:—Ashworth Construction Co., Ltd., Burley, £79,994 (recommended).

**Cannock, Staffs.**—Supply and installation of two electrically driven horizontal centri-

fugal pumping sets, together capable of discharging 1,500 g.p.m. of crude sewage against a head of approximately 45ft., for U.D.C. E. Lomax, engineer and surveyor:—Sigmund Pumps, Ltd., Team Valley, Gateshead, 11, £1,588.

**Derwent, Yorks.**—Laying of approximately 690 lin. yd. of 24in. diameter asbestos-cement pipe sewers and manholes, and alterations to the existing pumping plant at Barby, near Selby, for R.D.C. Fairbank and Son, consulting engineers, The Gables, 62a Bootham, York:—Squire W. Swift and Co., Ltd., Portholme Works, Selby, Yorks. Work commencing August.

**Doncaster, Yorks.**—Installation of pretreatment plant at the Sandall sewage disposal works, for B.C.:—Bradshaw Bros. (Contractors), Ltd., 117½ Loughborough Road, Leicester, £60,842 (recommended).

**Eastbourne, Sussex.**—Protective works at Langley Point outfall, for B.C.:—Direct Labour, £3,200 (recommended).

**Haltemprice, Yorks.**—Construction of approximately 1,700 lin. yd. of sewer, varying from 42in. to 60in. in diameter, mainly in fields from Hull Road, Cottingham, to Priory Road, Cottingham, for U.D.C. R. B. Heseltine, engineer and surveyor:—Sangwin, Ltd., Hull (accepted provisionally).

**Leeds.**—Construction of sewer to replace the 100-year-old sewer running from Wellington Street under the railway and River Aire and Leeds, and Liverpool canal to Globe Road, For City Council:—M. Harrison and Co. (Leeds), Ltd., Post Hill Quarries, Farnley, Leeds, 12, £212,640 (recommended).

**Llwyn, Caerns.**—Construction of sewerage and sewage disposal works at Rhylcrafad, for R.D.C. D. Lloyd Jones, engineer:—Roger Hughes and Co., Ltd., Llysfaen Road, Old Colwyn, Colwyn Bay, Denbighshire, £10,993. Work has commenced.

**Newport Pagnell, Bucks.**—Old Bradwell relief sewer and effluent pipe from Fields estate, Haversham, for R.D.C. Lemon and Blizard, consulting engineers, 59 Tufton Street, Westminster, S.W.1:—Kelmack, Ltd., Hitchin, Herts, £4,385 (accepted); D. Tanner, Ltd., £4,649; Roads and Sewers, Ltd., £4,716; Stirton Partners, Ltd., £4,876; W. T. Revitt, Ltd., £5,767; J. E. Lucas, Ltd., £6,054; Hadspahltic Construction Co., Ltd., £6,330.

**Okehampton, Devon.**—Construction of about 860yd. of 6in. dia. sewers, complete with manholes and a sewage purification works, in the parish of Sampford Courtenay, for R.D.C., comprising détritus and screening chambers, sedimentation tanks, percolating filter, humus tank, sludge drying beds, together with ancillary site buildings, pump-house, pumping well, drains, etc., and adaptation of existing disposal works to treat storm water:—S. Maddaford and Son, Ltd.

Exonia, Exeter Road, Okehampton, Devon, £7,061. Work to commence Sept. 1.

**Stockport, Ches.**—Construction of surface water outfall sewer at Offerton neighbourhood unit, for B.C.:—J. F. Donelon and Co., Ltd., 30 Slade Lane, Manchester, 13, £30,076 (recommended).

**Stretford, Lancs.**—Civil engineering works for sewage disposal works reconstruction, for B.C.:—Simon-Carves, Ltd., Cheadle Gatley, Stockport, Ches., £470,479 (recommended, subject to Ministry approval).

**Sunderland, Dur.**—Concrete protection works to Roker Gill outfall sewer, for B.C.:—Thos. Lavelle, £2,888 (recommended).

**Lymington, Hants.**—Laying of approximately 275yd. of 9in. diameter stoneware sewer in Stopples Lane, Hordle, and 177yd. of 6in. diameter stoneware sewer, together with manholes at Stopples Lane, Hordle, for B.C. H. E. Stopher, borough engineer:—Ashworth Construction Co., Ltd., Burley Hants, £3,461. Work commencing August.

**Wanstead and Woodford, Essex.**—Supply of mono-rail equipment for sewage works reconstruction scheme, stage I, for B.C.:—Road Machines (Drayton), Ltd., Horton Parade, Winsley, West Drayton, Middx., £4,429 (recommended).

**Wirral, Ches.**—Heswall sewerage scheme, for U.D.C., comprising the provision, laying and jointing of approx. 6,600yd. of concrete tube sewers, 57in. to 15in. dia. manholes, the construction of two piled outfall sewers, together with storm overflows, and the construction of sludge drying beds and a sludge pumping station at the site of the existing sewage disposal works. John H. Haiste and Partners, consulting engineers, Belmont House, 20 Wood Lane, Headingley, Leeds:—H. O. Andrews, Ltd., 408 Oakwood Lane, Leeds, 8.

#### STREET LIGHTING

**Dorchester.**—Supply of lanterns, brackets and lamps, etc., for improved lighting at Weymouth Avenue and Trinity Street, for B.C.:—G.E.C. Ltd., £1,019 (recommended).

**Kesteven.**—Supply and erection of 32 group A steel columns, complete with 400-watt mercury lanterns, on the Stamford By-pass, for M.T.:—Abacus Engineering, Ltd., Russell Chambers, King Street, Nottingham.

**Reading, Berks.**—Street lighting works at various roads, for B.C.:—Direct Labour, £4,895 (recommended).

**Wanstead and Woodford, Essex.**—Following works in connection with stages VI and VII of the district road lighting scheme, for B.C.: Supply and erection of street lighting columns and lamps:—Erecon, Ltd., Great Amwell, Ware, Herts., £13,307; electrical services:—London Electricity Board, £12,369; removal of existing gas installations:—North Thames Gas Board, £1,885 (recommended).

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## GOVERNMENT CONTRACTS

**Admiralty.**—Particulars of contracts, over £1,000 in value, placed by Navy Works Department:  
Shropshire: Resurfacing roads:—Tarslag, Ltd., Wolverhampton.

Morayshire: Construction of garages:—W. Douglas and Sons, Buckie.

Hampshire: Internal decoration:—Abbott of Harrow, Ltd., Harrow.

Somerset: Hangar aprons and perimeter track:—John Laing and Son, Ltd., Bristol.

Warwickshire: Internal painting:—T. E. Cundy and Son, Ltd., Leicester.

Hampshire: Erection of married quarters:—Faulkner's Public Works Co., Ltd., Waterlooville, Hants.

Argyllshire: Construction of P.O.L. storage depot:—Melville Dundas and Whitson, Ltd., Glasgow, C.2.

**Air Ministry.**—Contracts to the value of £500 or over for the week ended July 8:

Building work: London Airport, Hounslow, Middx.:—J. Lawson and Co., Ltd., 28 Park Road North, Acton, London, W.3; York:—F. Shepherd and Son, Ltd., Blue Bridge Lane, York; London Airport, Hounslow, Middx.:—Pauling and Co., Ltd., 28 Victoria Street, London, S.W.1.

Building and civil engineering work: Halton, Bucks.:—H. J. and A. Wright, Ltd., Great Missenden, Bucks.

Painting work: Bawtry and Norton (Yorks.) and Worksop (Notts.):—J. Ibbotson, Ltd., 219 Bentley Road, Doncaster, Yorks.

Installation work, air-conditioning plant: Leuchars, Fife:—Supervents, Ltd., Magrane House, Sidcup By-pass, Kent.

Draughtproofing: Stafford:—Lewis and Watters, Ltd., Greyfriars, Stafford.

**Metropolitan Police.**—Contracts recently placed:

Internal alterations and redecorations: Balham police station:—John Appleby and Sons, Ltd., £1,639.

**Ministry of Finance, N. Ireland.**—Contracts exceeding £250 in value placed during the period June 20 to July 1, inclusive:

Electrical installation: Gosford Poultry Testing Station, Co. Armagh:—I. Hazley, 28 Ballymore Road, Tandragee, Co. Armagh.

Alteration and extension hostel accommodation: Loughry Agricultural College:—J. Sinton, Ltd., Market Street, Tandragee, Co. Armagh.

Pointing of brickwork: Ministry of Finance, Fermanagh House, Ormeau Avenue, Belfast, 2:—Guiney and Lee, 77 Percy Street, Belfast, 13.

Assembly, etc., hay barn and fuel store: Ulster College of Physical Education, Jordanstown:—J. C. Ramsey, 101 Mount Merrion Park, Belfast, 6.

Construction, etc., hay barn into hay drying unit: Greenmount Agricultural College:—Guiney and Lee, 77 Percy Street, Belfast, 13.

Supply, etc., grates and tiled fireplaces, seven houses: Greenmount Agricultural College:—R. Kirk, Ltd., Exchange Street, Belfast, 1.

Adaptations at Simpson's Hill, Killycoogan: Ministry of Agriculture, Fisheries and Food, Portglenone:—E. Dawson and Sons, Main Street, Bellaghy, Co. Londonderry.

Cleaning and painting: Stranmillis Training Centre:—G. F. Johnston, Ltd., 70 Clifton Street, Belfast, 13.

Periodical local maintenance: District C, Group 10:—William Evans and Son, Castle Street, Bellaghy, Co. Londonderry; District B, Group 4:—J. McClelland, 1 Cedarwood, Bangor, Co. Down.

Supply, etc., steel hay barn: Ulster College of Physical Education, Jordanstown:—R. Jefferson, Ltd., 35-37 Bow Street, Lisburn.

External painting and internal painting and cleaning: Ministry of Education, Balmoral Hall:—J. Garvey and Co., Ltd., 111-113 Divis Street, Belfast, 12.

**Ministry of Works.**—Contracts placed for week ended July 2:

Brecknockshire: Post Office, Silver Street, Brecon—erection of motor transport workshop:—W. and A. Davies, Ltd., Snatchwood Road, Abersychan, Mon.

Cambridgeshire: Home Office Depot, Cambridge—painting:—Spraycraft Co., Ltd., 61 Widmore Road, Bromley, Kent.

Cumberland: Telephone Exchange, Whitehaven—completing erection:—Border Engineering Contractors, Ltd., 125 Queen Street, Whitehaven.

Hampshire: R.A.F., Titchfield—installation of heating plant:—G. N. Haden and Son, Ltd., Avon Road, Bournemouth.

Leicestershire: Station Sorting Office, Campbell Street, Leicester—internal decorations:—T. E. Cundy and Son, Ltd., 28 Belgrave Road, Leicester.

London: 90 Regency Street, and 14 Douglas Street, S.W.1—occupational services:—Dearsley and Carter, Ltd., King Street, Hammersmith, W.6.

Middlesex: Public Record Office, Bourne Avenue, Hayes—renewal of asbestos roof:—Hall and Co., Ltd., Cherry Orchard Road, Croydon, Surrey; National Physical Laboratory, Teddington—treatment of pressure air vessels:—Metallisation, Ltd., Pear Tree Lane, Dudley, Worcs.

Surrey: Inland Revenue Office, Lynwood Road, Thames Ditton—renewal of felt roofing:—Field and Palmer, Ltd., Station Road, Wood Green, N.22.

Yorkshire: Department of Scientific and Industrial Research, Hull—extension to laboratory:—F. Shepherd and Son, Ltd., Blue Bridge Road, York; Joint Office Building, Linthorpe Road, Middlesbrough—erection:—F. Shepherd and Son, Ltd., Blue Bridge Road, Middlesbrough.

**Post Office.**—Contracts for duct laying, etc., works to the value of £4,000 and over placed during the week ended July 9:

A. H. Dingle, Ltd., Seton, Mount Ambrose, Redruth, Cornwall; The Eden Construction Co., Ltd., English Damside, Carlisle, Cumb.; The Norwest Construction Co., Ltd., Litherland, Liverpool, 21; William Press and Son, Ltd., 22 Queen Anne's Gate, Westminster, London, S.W.1; George Taylor (Wolverhampton), Ltd., The Viewlands, Cross Road, Albrighton, Wolverhampton, Staffs.

**War Department.**—Contracts placed for the week ended July 1:

Hampshire: Tidworth—building:—W. E. Chivers and Sons, Ltd., Devizes.

Lancashire: Bury—building:—James Greenwood, Ltd., Bury.

Somerset: Taunton—miscellaneous:—Frederick C. Spear, Ltd., Taunton.

Wiltshire: Boreham—heating:—John Carter and Son (Salisbury), Ltd., Salisbury; building:—W. E. Chivers and Sons, Ltd., Devizes; Corsham—fire mains:—Ernest Ireland (Contractors), Ltd., Bath.

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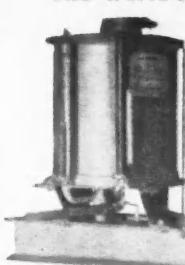
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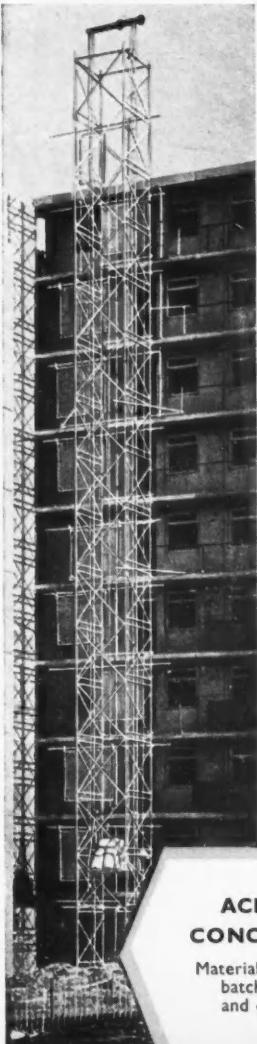


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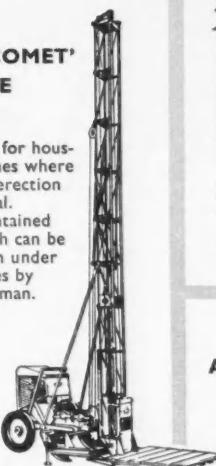


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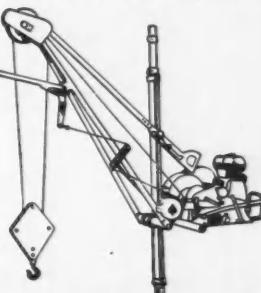


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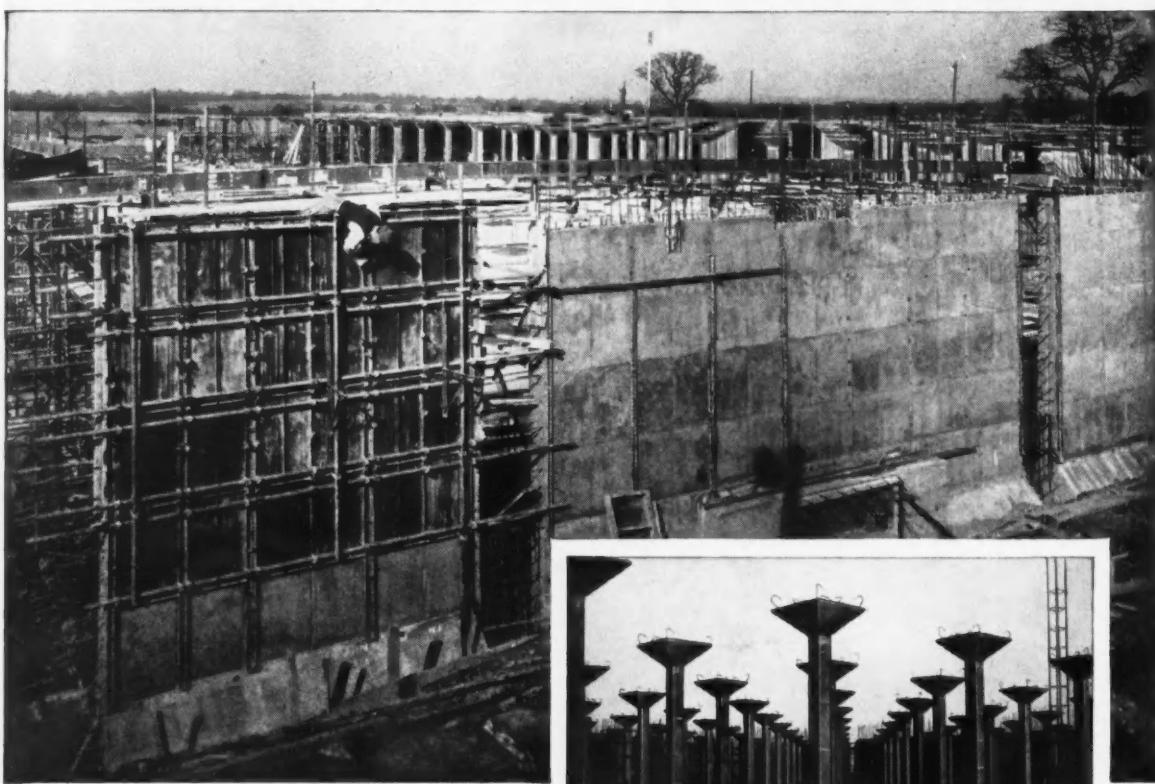
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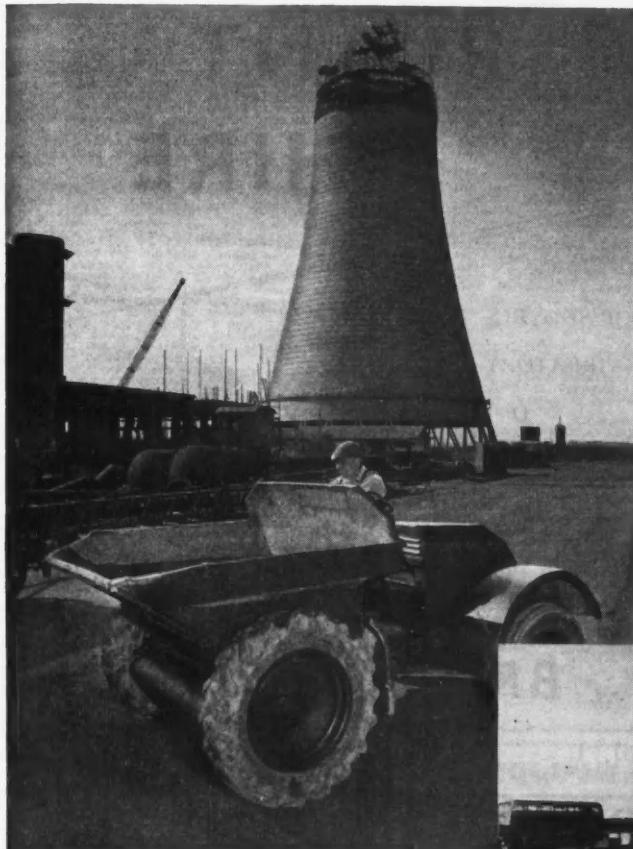
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(Continued from page 269)

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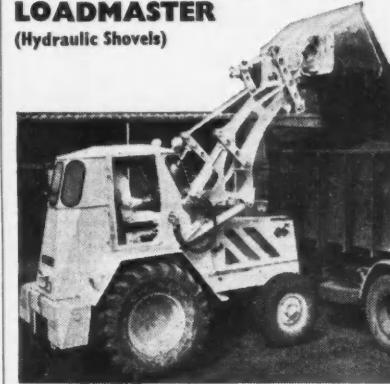
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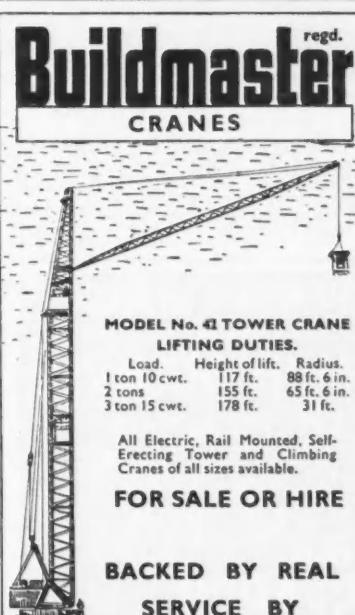
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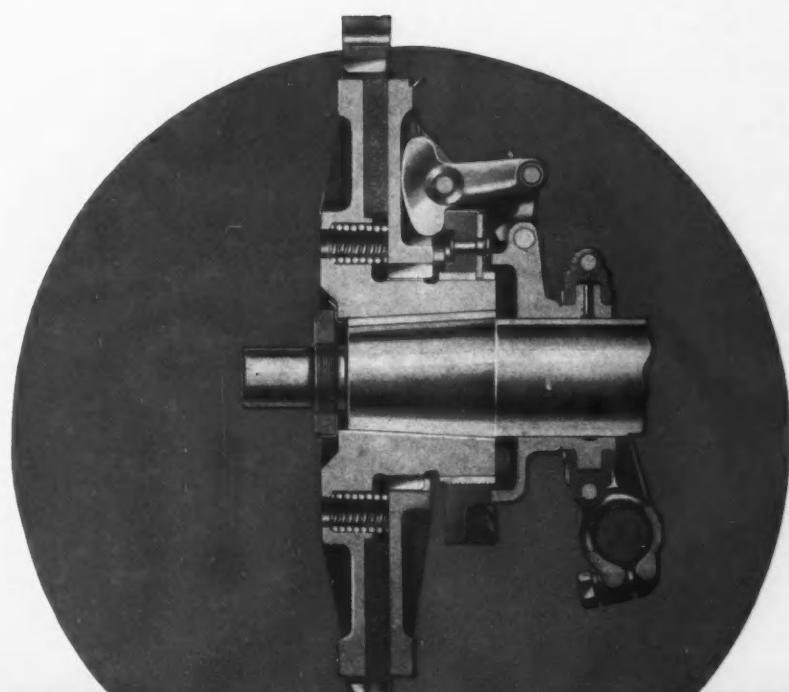
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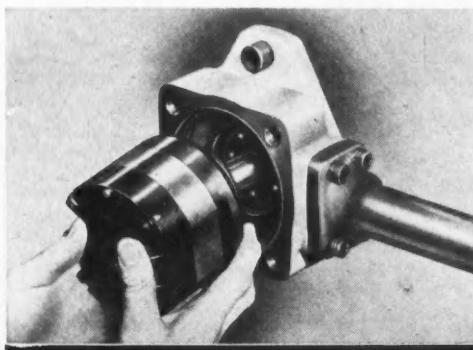


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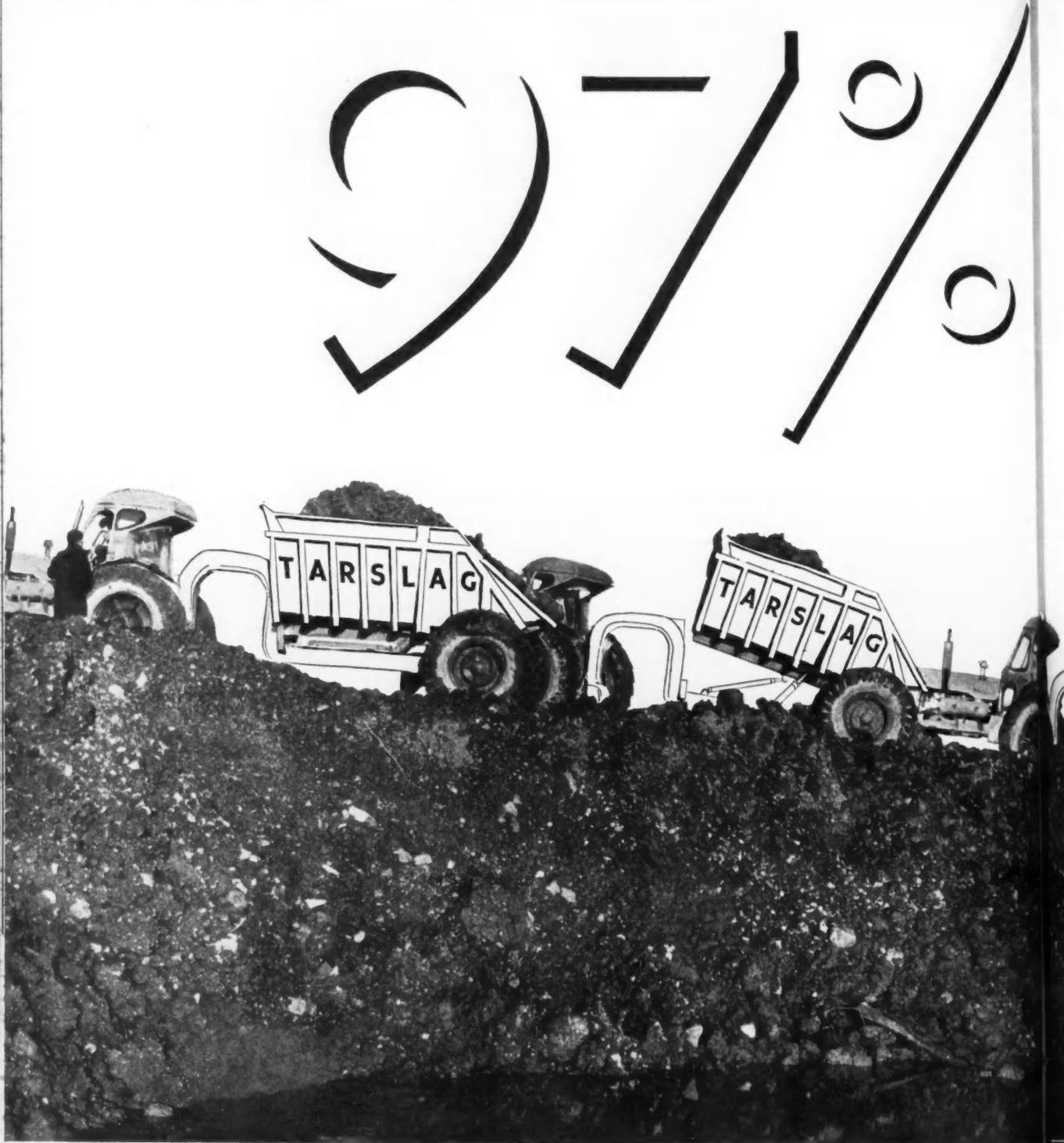


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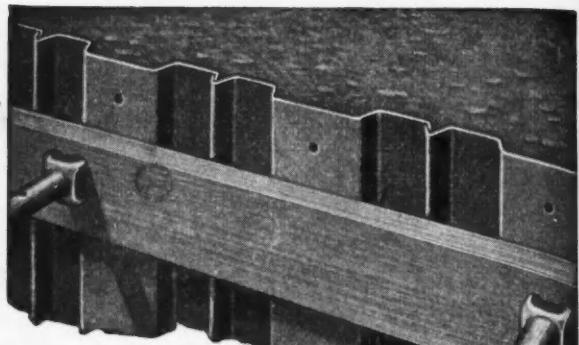
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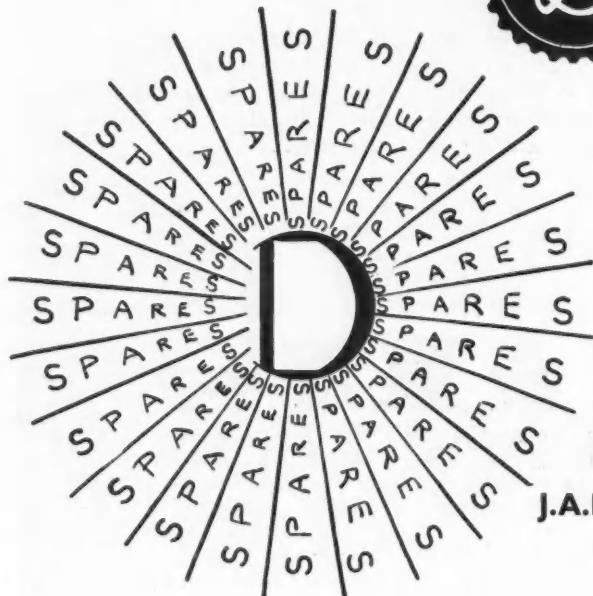
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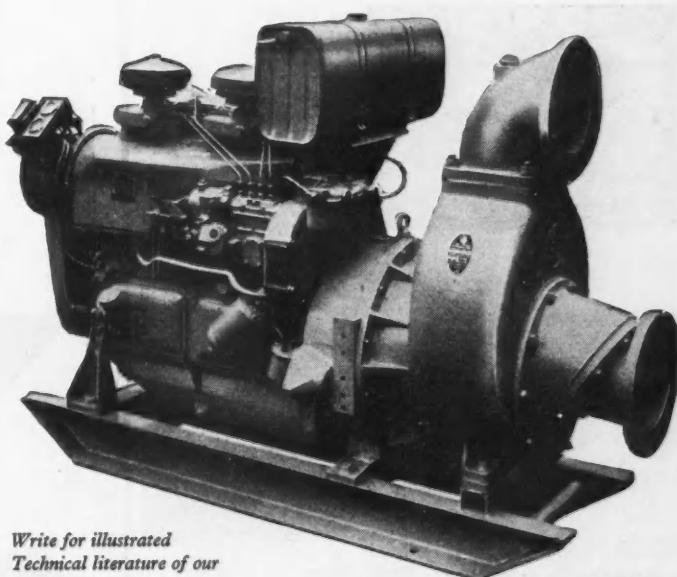
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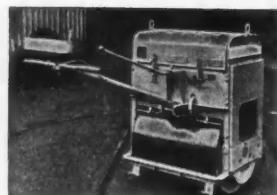


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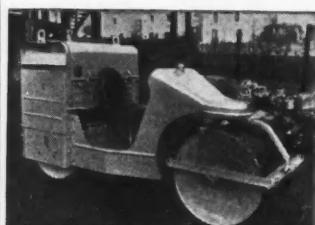
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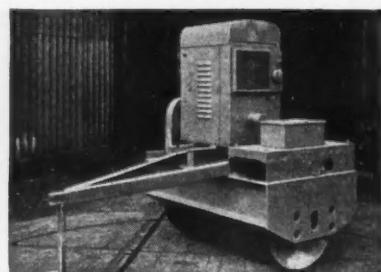
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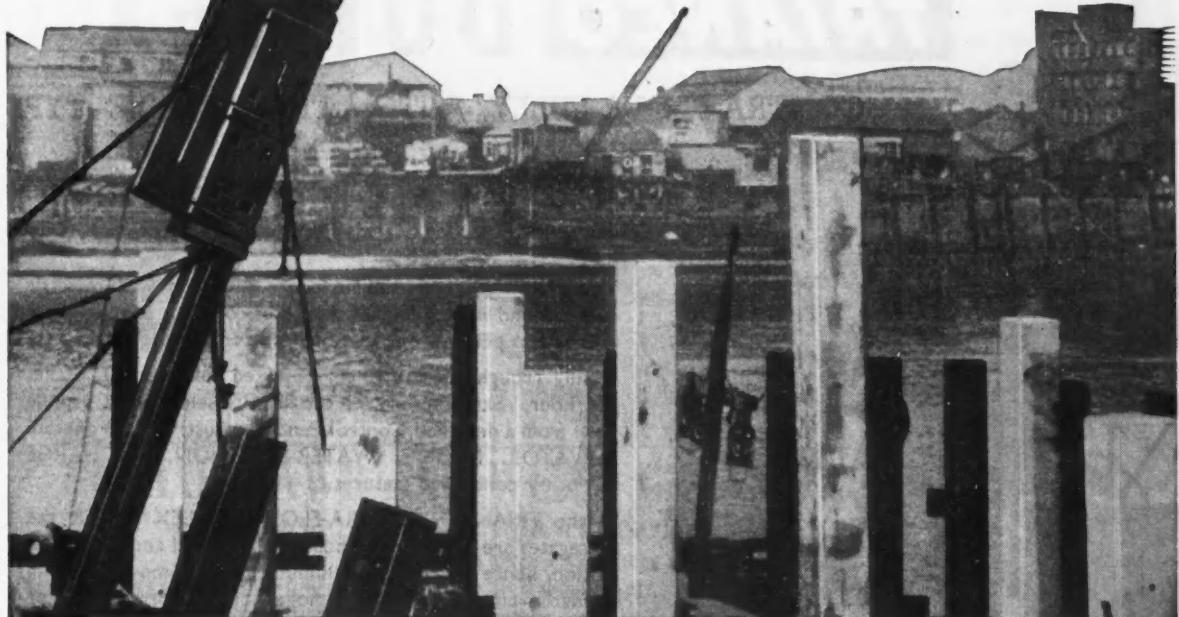
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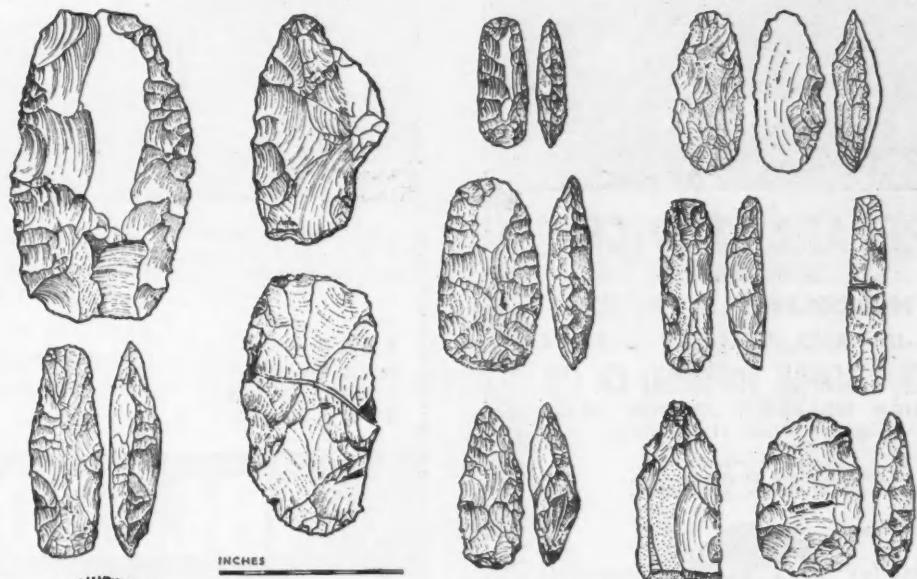
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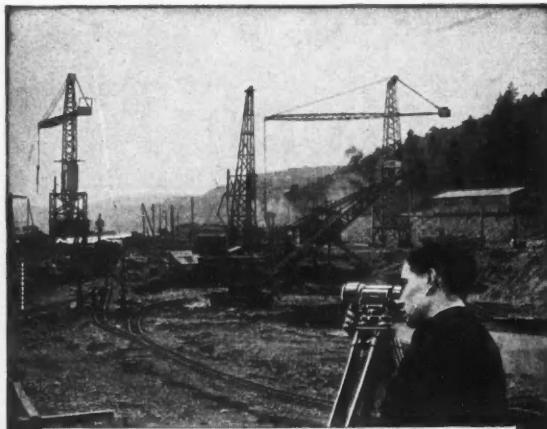
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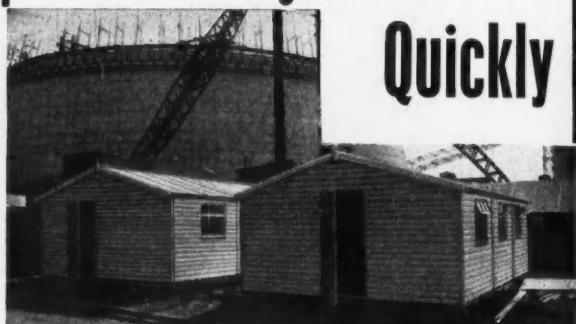
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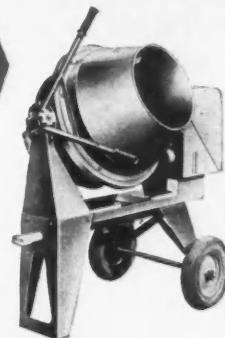
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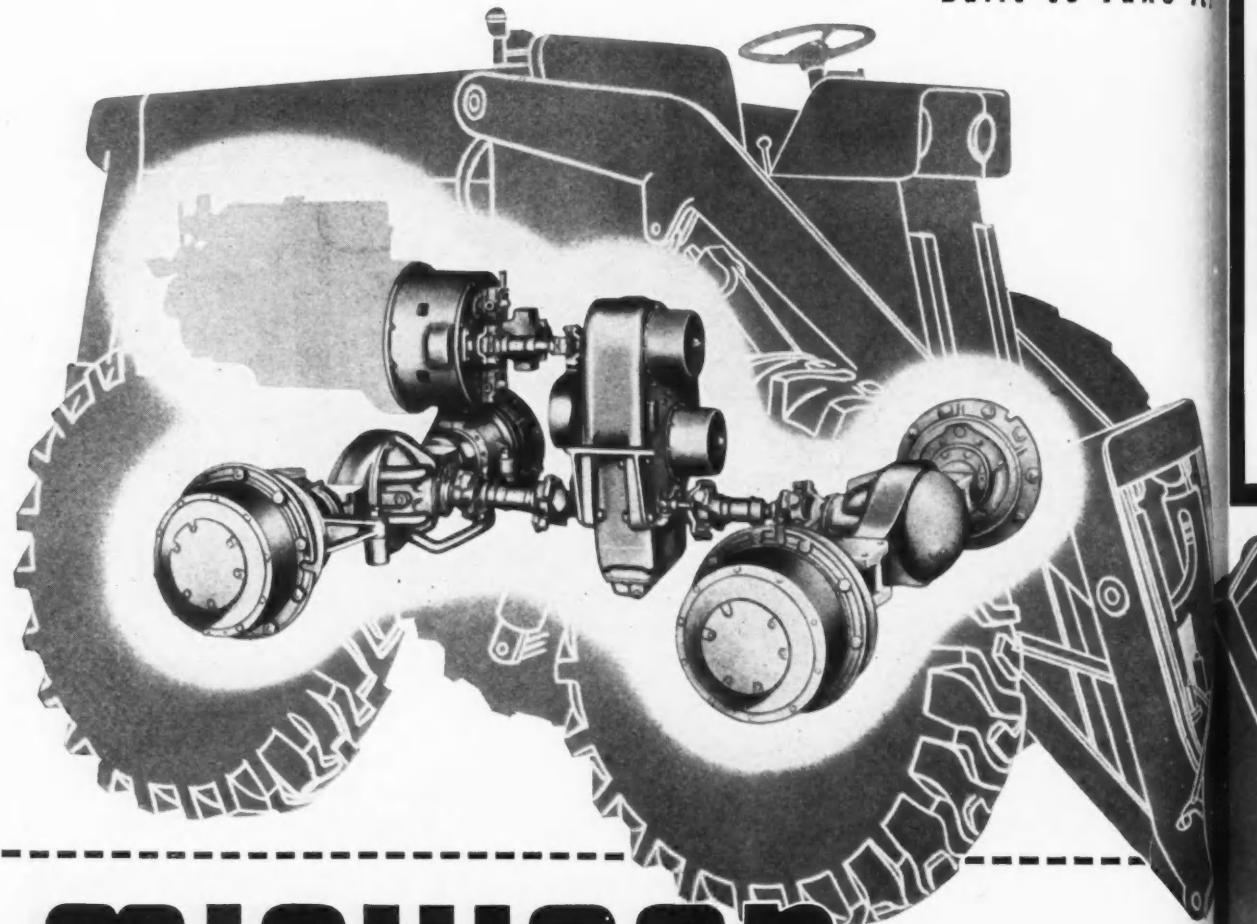
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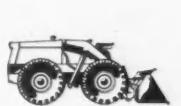
275A  
Supertractor Shovel



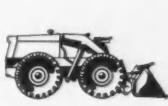
175A  
Tractor Shovel



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Tractor Shovel



85A  
Tractor Shovel



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Tractor Shovel



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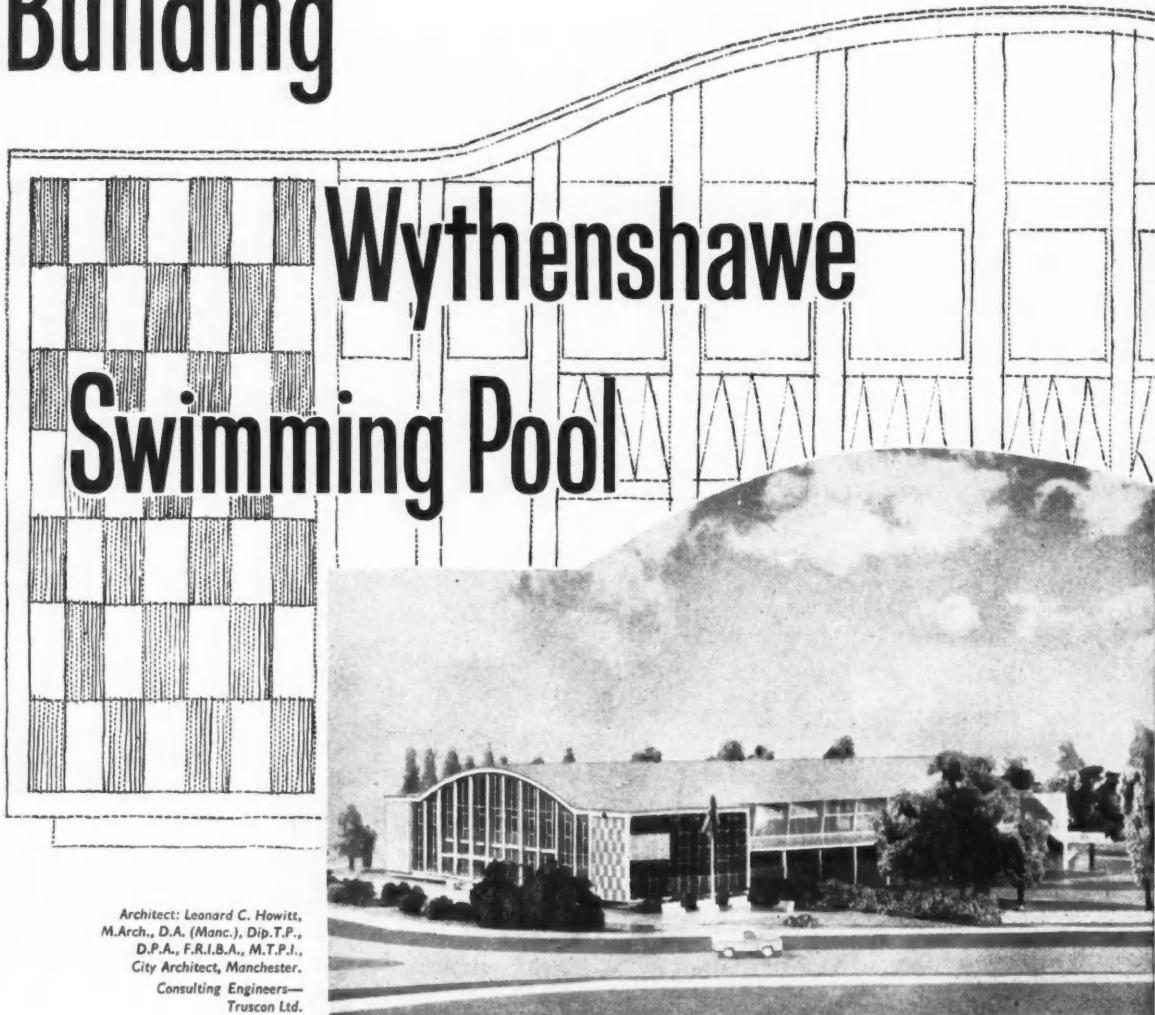
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# CONTRACTORS' GUIDE TO AGGREGATES

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**DANGERFIELD, F. J., & CO., LTD.**, 261A Finchley Rd., London, N.W.3. (Tel.: Hampstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**FERRERSAND AGGREGATES, LTD.**, Northampton Rd. Quarries, Rusden (236/5). (See Northants.)  
**GRAVEL, SAND AND GRAVEL (HUMBERSIDE), LTD.**, St. Neots, Hunts. (Tel.: St. Neots 323.) Pits at Little Paxton, near St. Neots. (Tel.: St. Neots 308.) Deliveries in Beds., Hunts., and South Camb.  
**ST. IVE'S SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2; 3/4.) (See Huntingdonshire for details.)  
**WEBS, G., CAMBRIDGE**, 35 Magrath Avenue, Cambridge. (Tel. 3969, 4353, 59966.) (See Camb.)  
**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producer of all grades washed aggregates in Bedfordshire and Northamptonshire. Regular deliveries elsewhere.  
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## BERKSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.  
**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: ViGiant 2530.) (For details, see Leics.)  
**BULL BROS., S. AND L., LTD.**, 126A High Street, Winchester. (Tel.: 2264.) (See Hampshire.)  
**DANGERFIELD, F. J., AND CO., LTD.**, 261A Finchley Rd., London, N.W.3. (Tel.: Hampstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**GRUNDON, S. (EWELME), LTD.**, Ewelme 20. London Office: (Tel.: Uxbridge 4156.) All grades washed aggregates. Path hognail, broken stone, building sand.  
**HAINES, H. (WITNEY), LTD.**, Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling sand.  
**JANES AND CO., LTD.**, 2C Buckingham Avenue, Slough. Sand aggregates, hardcore, ashes, building sand, etc. (Tel.: Slough 2036/2/3.)  
**LONDON BALLAST CO., LTD.**, (Tel.: Paddington 5064.) SSA Porchester Terrace, North Paddington, W.2.  
**POOLE (LECHLADE), LTD.**, Gravel Pit, Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)  
**RALPH OF BASINGSTOKE, LTD.**, 37 Kempton Lane, Basingstoke. Hand, North Paddington, W.2.  
**WRAYBURN SAND AND GRAVEL CO., LTD.**, Station Road, Theale, Reading. (Tel.: Theale 373.)

## BRECKNOCKSHIRE

**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.) Salop.

## BUCKINGHAMSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

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**COFF, HARRY, W. LTD.**, Burkhurst Hill, Chichester, Ascot, Berks. (Tel.: 1026/7.) (See Berkshire.)

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**DRINKWATER, W. W. (WILLESDEN), LTD.**, Ruth Green, Denham, Bucks. (Tel.: Denham 2241/2/3.)

**GRUNDON, S. (EWELME), LTD.**, Ewelme, Oxon. (Tel.: Ewelme 20.) London Office: (Tel.: Uxbridge 4156.) All grades washed aggregates. Path hognail, broken stone, building sand.

**HAINES, H. (WITNEY), LTD.**, Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.

**HALLIDAY CO., LTD.**, Buntingford, Middlesex. (Tel.: Islsworth 4455/6) and Coronation Road, High Wycombe. (Tel.: 4360/1) and at Gerrards Cross.

Pits at Wraybury (Middx) and Ivor (Bucks.).

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**LONDON BALLAST CO., LTD.**, (Tel.: Paddington 5064.) SSA Porchester Terrace, North Paddington, W.2.

**MARLOW SAND AND GRAVEL CO., LTD.**, Westhorpe Pit, Little Marlow, Bucks. (Tel.: Marlow 379.)

**STONE MACEY, LTD.**, Gordon Road, High Wycombe.

**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

## CAMBRIDGESHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: ViGiant 2530.) (For details, see Leics.)

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**DANGERFIELD, F. J., & CO., LTD.**, 261A Finchley Rd., London, N.W.3. (Tel.: Hampstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**DARBY'S SAND AND GRAVEL CO., LTD.**, The Brook, Sutton, Ely. (Tel.: Sutton 391/3.) All grades of washed sand and gravel, ready-mixed concrete. Pits: Meaple and Chippenham, Camb.  
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**WEBS, G., CAMBRIDGE**, 35 Magrath Avenue, Cambridge. (Tel. 3969, 4353, 59966.) (See Camb.)

**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

## CARDIGANSHIRE

**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.) Salop.

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**BUCKTON QUARRY**, broken stone, all grades. (Tel.: Mossley 123.) Or write Main Road, Oldham. (See Lancashire for details.)  
**CASTLETON SAND AND GRAVEL QUARRIES, LTD.**, Pennant End, Whaley Bridge. (Tel.: Whaley Bridge 139.) Washed sand and gravel.  
**CARLTON MARLTON AND CO., LTD.**, Pistyll Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-y-lal 27.) Crushed limestone and tared macadam, all grades.  
**CHESTER AND NORTH WALES TARRED MACADAM CO., LTD.**, Llanarmon, near Mold. (Tel.: Llanarmon-y-lal 43.) Washed, broken limestone, dry and coated, to B.S.S. Inquiries to registered office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 88094.)

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**DUNNING AND SON, LTD.**, (See Shropshire.)

**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)

**HILTON, C. R., LTD.**, 233/4, High Street, Romford, Essex. (Tel.: Romford 4233/4.) Washed sand, sand and gravel, sand and gravel, soft building sand.

**HULLAND GRAVEL CO., LTD.**, Chedde, Stoke-on-Trent. (Tel.: Chedde 233/4; 219 and 215.) Manchester Office: (Tel.: 344/5.) Washed sand, Romford, Manchester, 21. (Tel.: Chertton 2274/5.)

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**BROOMBY'S LTD.**, Sandgate, Milnthorpe (Tel. 3251/2). Westmorland. (See Westmorland.)

**ESK MANUFACTURING CO., LTD.**, Dalton Road, Carlisle, Cumberland. (Tel.: Carlisle 2-4941.) All grades washed, crushed gravel and concreting sand to B.S. Specification. Pre-mix concrete products and partition blocks. Sand lime, colored facing and common bricks. Ex works or delivered.

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**GRAVEL HILL SAND QUARRIES, LTD.**, Tel.: Ashby (Leics.) 79. (See Leicestershire for details.)

**HILTON GRAVEL, LTD.**, Hilton, Derby. (Tel.: Etwall 422.) Also at Mercaston. (Tel.: Brailsford 316.) And at Willington. (Tel.: Repton 3215.)

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**HOVERINGHAM GRAVEL CO., LTD.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)  
**HULLAND GRAVEL CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester. (Tel.: Chorlton 2274/5.)  
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**DANGERFIELD, F. J., AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: Hampstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

**DORSET LIMESTONES, LTD.**, Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) Tarred and bituminous macadam, foundation materials, limestone for all purposes and to all gradings. Portland stone, aggregates and Portland capstone aggregates for reconstructed stone, roads and sea.

**GILSON, AND CO. SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)  
**HALL AND CO., LTD.**, 8 Commercial Road, Parkstone (Tel.: 5379.)  
**MONKLAND (VERWOOD), LTD.**, Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggin, path gravel.

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**BRAITHWAITE, A., AND CO., LTD.**, Knaresborough, Yorks. Quarry at Catterick. (Tel.: Old Catt. 157.) (For details see Yorkshire.)

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**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: ViGiant 2530.) (For details, see Leics.)

**BENT-MARSHALL (LEYTON), LTD.**, 665-667 High Road, Leyton, E.10. (Tel.: Leytonstone 4047/8.) Sand, ballast, brick and concrete hardcore delivered all arms.

**HALLIDAY CO., LTD.**, Manor Road, Romford. (Tel.: Romford 4233/4.) Pits at Avery, Boreham and Linton, near Gray. Gravel, aggregates, concreting, plastering and building sand.

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**PETERS AND BARMAH, LTD.**, 309 South Street, Romford. (Tel.: Romford 44141—7 lines.) Washed and crushed gravel, all sizes; sand. Pits at Ashdown, Chignall St. James, Dagenham, Great Waltham, North Ockendon, Roxwell, West Thurrock.

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**ST. IVE'S SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2; 3/4.) (See Huntingdonshire for details.)

**STANWAY CONTRACTS, LTD.**, Upper Edwards Hall, Easwood, Southend-on-Sea. (Tel.: Eastwood 55161.) Sand and gravel pits at Rochford and Woodham Walter. Graded aggregates supplied or delivered.

**WELFORD GRAVELS, LTD.**, Head Office: Goldington, (Tel.: 14587/8/9.) Washed and graded aggregates. Local Office and pits: Tillington 207.

**WIVENHOE SAND, STONE AND GRAVEL CO., LTD.**, Wivenhoe, Essex. (Tel.: Wivenhoe 231.) High-quality washed aggregates of all grades.

## GOLOCESTERSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates, to B.S.S.

**BENGHORN, F. LTD.**, Longnor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

**COKE, T. F. (CHELTENHAM), LTD.**, 267 Gloucester Road, Cheltenham. (Tel.: Cheltenham 4717/4767.) Sand, graded gravel aggregates, hardcore, limestone chippings, tarred and bituminous limestone, concrete blocks, facing pavers, etc.

**CROMHALL QUARRIES, LTD.**, Cromhall, Wotton-under-Edge, Glos. (Tel.: Falfield 346/7.) Concrete aggregates, pre-graded in large quantities. Tarmacadam, tarpaving, bituminous macadam and cold asphalt. B.S. 101 and 102 hand or machine laying.

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**GRIFFITHS, A., AND SONS, LTD.**, Churchdown, Gloucester. (Tel.: Churchdown 3135 and 2216.) Pit, quarry and dredger owners. All grades and types aggregate materials.

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## CONTRACTORS'

## GUIDE TO AGGREGATES

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**POOL QUARRIES LTD.**, Great Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)

**TAYMAC LTD.**, Wootton Bassett, Swindon. (Tel.: Wootton Bassett 391—5 lines.) (See Wiltshire.)

**WHITECLIFF QUARRIES AND BRICKWORKS LTD.**, Coleford, Glos. (Tel.: Coleford 1158/9.) Fired red and bluestone, limestone macadam, asphalt, concrete aggregates, dolomitic media, engineering, facing and common bricks for all purposes. Delivery road or rail.

## HAMPSHIRE

**AMEY'S AGGREGATES LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Wantage. (Tel.: Sutton Courtney 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates.

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226 7/8; or London: VIGIant 2530.) (For details, see Leics.)

**BULL BROS. S. AND L. LTD.**, 1264 High Street, Winchester. (Tel.: 2244.) Concrete aggregates (from quarries), tarmac, weighbatched to meet any specification; also ballast, hoggins, path gravel and sand from own pits at Fawley, Lockerley, Ringwood, Romsey, Swanage and Totton.

**DANFORTH, J. W. & CO., LTD.**, 26A Finchley Road, London, N.W.3. (Tel.: HAMPstead 8044/8.) For all road aggregates, kerbs, sets. (See London.)

**GILSON, S. C. AND SONS LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

**HALL AND CO., LTD.**, Ballards Wharf, Market Parade, Southampton. (Tel.: Southampton 2236) and at Portsmouth. Pits at Ringwood, Highbridge and Totton. Gravel aggregate, concreting, plastering and banding sand.

**HASKINS, G. AND SONS**, Queen Street, Emsworth. For washed sand and graded aggregates, path and road gravels, hoggins, clinker, ashes. (Tel.: Emsworth 2271.)

**MOREYS (VERWOOD), LTD.**, Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, plaster.

**NEW MILTON SAND AND BALLAST CO., LTD.**, Lympington Road, New Milton, Hants. (Tel.: 37 and 566.) Guaranteed uncrushed, washed, screened and graded concrete aggregates. All sizes. Washed and dry.

**PETERSFIELD ENGINEERING AND CONCRETE PRODUCTS**, Buriton, nr. Petersfield, Hants. (Tel.: Petersfield 1079.) Concrete aggregates, washed and graded filter media.

**PRIVATE AGGREGATES LTD.**, Dravton Lane, Portsmouth. (Tel.: Cosham 70059.) Concrete aggregates, building sand, hoggins, ashes, washed and graded filter media, etc.

**RALPH OF BASINGSTOKE LTD.**, 37 Kempshott Lane, Basingstoke, Hants. (Tel.: 851.) Concrete aggregates, building sand, with gravel, hoggins, etc.

**WESEY SAND AND GRAVEL CO., LTD.**, 126 Hillside Avenue, Southampton. (Tel.: 56616.) Pits at Romsey and Fair Oak. Concrete aggregates, hoggins, building sand, etc.

**WRAYSBURY SAND AND GRAVEL CO., LTD.**, Station Road, Theale, Reading, Berks. (Tel.: Theale 373.)

## HEREFORDSHIRE

**BENRY AND SONS LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 3014.) Suppliers of all grades of crushed concrete aggregates, road metal, paving stone, hardcore and coated macadam.

**HARPER AND THOMAS LTD.**, Bayston Hill Quarry, Shropshire. (Tel.: Shropshire for details.)

**NASH ROCK STONE AND LIME LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) All grades of tarred and bituminous macadam, roadstone, chippings and concrete aggregates, etc.

**OLD RADNOR TRADING CO., LTD.**, Kington. (Tel.: Kington 2213.) Coated and uncoated macadam, concrete products, coated macadam, concrete aggregates, limestone aggregates, road metal, paving stone, hardcore and coated macadam.

**SALOP SAND AND GRAVEL SUPPLY CO.**, Astmaston, Wellington (Tel.: 961). Salop.

**WHITECLIFF QUARRIES AND BRICKWORKS LTD.**, Coleford, Glos. (Tel.: 3158/9.) (See Gloucestershire.)

## HERTFORDSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, 1264 High Street, (Tel.: Coalville 1226 7/8; or London: VIGIant 2530.) (For details, see Leics.)

**DANGERFIELD, F. J. AND CO., LTD.**, 26A Finchley Road, London, N.W.3. (Tel.: HAMPstead 8044/8.) For all road aggregates, kerbs, sets. (See London.)

**GARIBOLDI LTD.**, 22 The Broadway, Enfield, Middx. (Tel.: HOWard 4351/2/3.) Washed aggregates and building sand. Pits at Hertford and Enfield.

**HALL AND CO., LTD.**, Railway Yard, Orchard Road, Stevenage. (Tel.: 775.) and at Hatfield. Gravel aggregates, concreting, plastering and building sand.

**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)

**WEBB, G. CAMBRIDGE LTD.**, 35 Magrath Avenue, Cambridge. (Tel.: 3969, 4353, 59966.) (See Cambs.)

**WINDLES HEMSTEAD LTD.**, Pitstone Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Pits at: Hemel Hempstead, Watford, West Hyde, Rickmansworth, and Watford. Concrete aggregates, hoggins, building sand.

## HUNTINGDONSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226 7/8; or London: VIGIant 2530.) (For details, see Leics.)

**FERRERSAND AGGREGATES LTD.**, Northampton Road Quarries, Rushden (2354/5). (See Northants.)

**GRAVEL PRODUCTS (HUNTS), LTD.**, St. Neots, Hunts. (Tel.: St. Neots 123.) Pits at Little Paxton, St. Neots. (Tel.: St. Neots 308.) Deliveries in Beds, Hunts and South Cambs.

**NENE BARGE AND LIGHTER CO., LTD.**, Market Chambers, Peterborough (Tel.: 5534/5), and Ship End Quarries, Wansford, near Peterborough (Tel.: Wansford 244/5). Rotsand, hardcore, broken stone, ballast, ashes, lime, fly ash, etc.

**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.

**WEBB, G. CAMBRIDGE LTD.**, 35 Magrath Avenue, Cambridge. (Tel.: 3969, 4353, 59966.) (See Cambs.)

**WELFORF GRAVELS LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

## KENT

**BRASSTED SAND PITS**, Brassted, Kent. (Tel.: 586.) London Office: 10A Ellery Street, S.E.15. (Tel.: New Cross 3337.) Soft and plastering sands, lime and sand-mix dry, hardcore, S.H. bricks, ashes, etc.

**BROWN BROS. (SITTINGBOURNE), LTD.**, Chalkwell Road, Sittingbourne, Kent. (Tel.: Sittingbourne 330.) Sand, ballast, shingle, hardcore, clinker, breeze blocks, etc.

**CLUBB, J. LTD.**, Dartford, Kent. (Tel.: Dartford 2543/4.) Pits in North Kent, Medway area and Sheppey district. Washed and crushed gravel aggregates, concreting and building sand.

**DIAMOND TREAD CO. (1958), LTD.**, Ditton Court Quarry, Larkfield, near Maidstone. (Tel.: West Malling 3444.) Quarry owners: tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 217a, Bailey Lane, Maidstone. (Tel.: 7001—10 lines.)

**DIAMOND TREAD CO. (CHART), LTD.**, Swan Lane Quarries, Little Chart, Ashford, Kent. Quarry owners: tarmacadam, bituminous macadam and dry roadstone suppliers. All inquiries to Area Office: Ditton Court Quarry, Larkfield, near Maidstone, Kent. (Tel.: W. M. Malling 3444.)

**HALL AND CO., LTD.**, Cannon Street, Maidstone. (Tel.: Maidstone 51051) and at Folkestone and Hayes. Pits at Lunsford, near Larkfield. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.

**HARRIS, M. P. AND CO., LTD.**, Station Road, Paddock Wood, Kent (Tel.: 385). (See Sussex.)

**TILBURN CONTRACTING AND DREDGING CO., LTD.**, Post Office, Maidstone. (Tel.: Maidstone 55401/2/3.) Suppliers of tarred bituminous and dry Kentish ragstone, sea-wash, asphalt fillers, Scotch granite and kerbing.

## LANCASHIRE

**BROOMBY'S LTD.**, Sandside, Minthorpe (Tel.: 3251/2.) Westmorland. (See Westmorland.)

**BUCKTORP QUARRIES**, Broken stone, all grades. (Tel.: Mossley 123.) Or write: Main Road, Oldham.

**CASLETON SAND AND GRAVEL QUARRIES LTD.**, Town Lane, Castleton, nr. Rochdale. (Tel.: Castleton 57100.) Lee Quarries, Bacup. (Tel.: Bacup 287.) Washed pit sand, crushed washed stone aggregates; pitching stone.

**CROFT GRANITE BRICK AND CONCRETE CO., LTD.**, 200, Broadgate, Wigan. (Tel.: 2656.) Lubritized, graded aggregates to B.S.S., washed and bituminous macadam, cold asphalt, Croftomattite "Wet Mix" filter media, concrete products.

**CROXDEN GRAVEL LTD.**, Cheadle, Stoke-on-Trent, Staffs. (Tel.: Team 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.

**DUNNING AND SON LTD.** (See Shropshire.)

**HILTON GRAVE LTD.**, Rice Street, Liverpool Road, Manchester, 3. (Tel.: Deansgate 5455 and 5456.) Quarries at Chaddie, Staffs. (Tel.: Team 2413.) And at Longton, Stoke-on-Trent. (Tel.: Longton 32196.) Manchester Office: 46a Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

**HULLAND GRAVEL CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2523/4, 2119 and 2195.) Manchester Office: 46a Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

**PENMAENMAWEL AND WELSH GRANITE CO., LTD.**, all sizes and grades of washed granite aggregate. Immediate delivery ex stock. Liverpool and Preston Depots:

Office: 7 Picton Road, Liverpool, 15. (Tel.: Sefton Park 7261.)

Manchester Depot: 100, Corporation Street, Cornhill, Corbridge Road, Manchester, 15. (Tel.: Trafford Park 3630.)

**ROUND-O QUARRIES LTD.**, Helsby Street, Warrington. (Tel.: 35451—4 lines.) Building and concrete sand and shale.

**TERN HILL SAND AND GRAVEL CO., LTD.**, Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

**TRENT HILL SAND AND GRAVEL CO., LTD.**, Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

**TRENT HILL GRANITE CO., LTD.**, Lordship Quarries, Willoughbridge, near Market Drayton. (Tel.: Priorsgate 304/5.) All sizes crushed or natural washed gravel. Twice-washed sharp sand. Plastering sand. Plant capacity: 2,000 tons per day.

**WELFORD GRAVEL LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Local Office and pits: Chorley 3923.

**WITHERS LIMESTONE LTD.**, Black Lane Quarry, Carnforth. (Tel.: Carnforth 327.) Graded limestone aggregate to B.S.S. all sizes. Immediate delivery ex stock.

**X.L. GRANITE (INGLETON), LTD.**, Head Office: Clapham, via Lancaster. (Tel.: Clapham 318/9.) Works Tel.: Ingleton 231. All sizes and gradings of Ingleton granite aggregate.

## LEICESTERSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226 7/8; or London: VIGIant 2530.) (For details, see Leics.)

**CRONK GRANITE, BRICK AND CONCRETE CO., LTD.**, Croft, near Leicester. (Tel.: Narborough 2241/2/3.) "Kubittite" granite aggregate to B.S.S., tarred and bituminous macadam, cold asphalt, Croftomattite "Wet Mix", filter media, concrete products.

**DUSTON STONE QUARRIES LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298.) (See Northamptonshire.)

**BRUNTINGTHORPE GRAVELS LTD.**, Gilmerton, near Raby. (Tel.: Lutterworth 46.) All sizes gravel aggregate, building and concrete sand to B.S.S., specifically balanced ballast.

**CLIFFE HILL GRANITE CO., LTD.**, Markfield, near Leicester. (Tel.: Markfield 561/2/3.) Granite aggregates to B.S.S. All sizes. Tarred and bituminous granite, concrete slabs and kerbs. Transit-mixed concrete.

**CROFT GRANITE, BRICK AND CONCRETE CO., LTD.**, Croft, near Leicester. (Tel.: Narborough 2241/2/3.) "Kubittite" granite aggregate to B.S.S., tarred and bituminous macadam, cold asphalt, Croftomattite "Wet Mix", filter media, concrete products.

**DUSTON STONE QUARRIES LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298.) (See Northamptonshire.)

**ENDERBY AND STONEY STANTON GRANITE CO., LTD.**, 21 New Walk, Leicester. (Tel.: 56882.) Quarries at Enderby. London Offices: 29 Dorset Square, N.W.1. (Tel.: Ambler 1141.)

**GRAVEL HILL SAND QUARRIES LTD.**, Prior Park, Ashby-de-la-Zouch. (Tel.: Ashby 79.) Works: Hartshorne, Derby. Yellow screened plastering and building sand, all to B.S.S.

**HILTON GRAVEL LTD.**, Hemington Fields, near Shardlow, Derby. (Tel.: Shardlow 266.)

## LEICESTERSHIRE

**HOVERINGHAM GRAVEL CO., LTD.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

**MOUNTSORREL GRANITE CO., LTD.**, 21 New Walk, Leicester. (Tel.: 56682.) Quarries at Mountsorrel, near Loughborough, 1in. pink granite a specialty. London Office: 29 Dorset Sq., N.W.1. (Amb. 1141.)

**WANLIP GRAVELS LTD.**, Wanlip, Road, Syston, Leicester. Any size or grading, scientifically balanced ballast. All to B.S.S. (Tel.: System 2327 and 2797.)

**WELFORD GRAVELS LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Northamptonshire.)

**WREAKE VALLEY GRAVELS CO., LTD.**, Melton Mowbray. (Tel.: Pits: Rotherby 205 or head office Melton 2488.) All grades washed aggregates and sand.

## LINCOLNSHIRE

**CONINGBY SUPPLY CO., LTD.**, Registered Office: The Broadway, Woodhall Spa, Lincs. (Tel.: Woodhall Spa 3150.) Screened limestone, hardcore, pitching, flint, hoggins. Ex quarries or delivered.

**DOW-MAC (PRODUCTS), LTD.**, Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)

**EAST MIDLAND BUILDERS' SUPPLY CO.**, 21 Castle-dyke Road, Woodstock, Lincoln. Sole selling agents: Hartsholme Sales, Ltd., 17 West Parade, Lincoln. (Tel.: Lincoln 23391.)

**HARTSHOLME GRAVEL AND SAND CO., LTD.**, Hartsholme Wood, Doddington Road, Lincoln. Sole selling agents: Hartsholme Sales, Ltd., 17 West Parade, Lincoln. (Tel.: Lincoln 23391.)

**HOVERINGHAM GRANITE CO., LTD.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

**HURDLE, J. W. LTD.**, Victoria Street, Grimsby. (Tel.: Grimsby 3657) and Caistor (Tel.: Caistor, Lincs. 281.) Sand, gravel, hoggins, all grades. Concreting and roadmaking materials.

**PETERBOROUGH QUARRIES LTD.**, Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355—3 lines.) Quarry at Ropseby, all grades of hardcore and broken stone. (See also Northants.)

**POLLED, C. J. AND CO., LTD.**, Tallington. (Tel.: Tallington 2140.) All grades washed sand and aggregates. For "Supercrete" ready mixed concrete. (Phone Market Deeping 3132.)

**TRENTFORD GRAVELS LTD.**, Head Office: Deansgate, Grimsby. (Tel.: Grimsby 5155/6.) All sizes washed sand, hardcore, roadstone, hardcore slag, tarmac, ashes, etc. Pits and quarries throughout the county.

## LONDON

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226 7/8; or London: VIGIant 2530.) (For details, see Leics.)

**COX H. AND SONS LTD.**, 33 Southampton Way, Camberwell, S.E.5. (Tel.: Rodney 2215—3 lines.)

**CROFT GRANITE BRICK AND CONCRETE CO., LTD.**, 128-136 High Street, Edgware, Middlesex. (Tel.: Edgware 0076/7 and 1246.) "Kubittite" granite aggregate to B.S.S., tarred and bituminous macadam, cold asphalt, Croftomattite "Wet Mix", filter media, concrete products.

**DANGERFIELD, F. J. AND CO., LTD.**, 261A Finchley Road, N.W.3. (Tel.: HAMPstead 8044-8.) Granite limestone or slag, coated or dry, all sizes and pitching, granite kerb and sets, felspar quartz and other mineral's by road or rail, or ex London stock.

**DORSET LIMESTONES LTD.**, Bumpers Lane, Easton, Portland. (Tel.: Portland 2207/8.) (For details, see Dorset.)

**DRINKWATER, W. W. (WILLESDEN), LTD.**, Dudden Hill Lane, Willesden, N.W.10. (Tel.: Gladstone 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.) Also Staines Road, Hounslow, Middlesex. (Tel.: Hounslow 6222/3.)

**GABRIEL, C. LTD.**, Palmers Lane, Enfield, Middx. (Tel.: Howard 4351/2/3.) White and grey sand and shingles supplied and delivered.

**HALL AND CO., LTD.**, Chantrey House, Ecclesall Street, S.W.1 (Tel.: Sloane 7122), and at East Dulwich. Poplar and Wandsworth. Gravel aggregates, concreting, plastering and building sand.

**KERNE, A. LTD.**, 228, New Road, Epping, Essex. (Tel.: Epping 2520.) All sands, ballast, shingle and hardcore supplied.

**LONDON BALLAST CO., LTD.**, Palmer's Lane, Enfield, Middlesex. (Tel.: Paddington 5064/5.) 55A Porchester Terrace, North Paddington, N.W.2.

**REALD, P. LTD.**, 100, Old Bond Street, Green E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Royal Airfield, Forest Road, Ilford, Essex. (Tel.: Hainault 6111/2/3.)

**ROADS RECONSTRUCTION LTD.**, Stockier Lane, W.M. (Tel.: Drayton 3041.) All sizes broken limestone, dry and coated to British Standards.

## MERIONETHSHIRE

**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington. (Tel.: 961.) Salop.

## MIDDLESEX

**CROSS, GEO. C. AND CO., LTD.**, Uxbridge Road, Southall. (Tel.: Southall 2264/5/6.) Concrete aggregates, hardcore, excavations, demolitions.

**DRINKWATER, W. W. (WILLESDEN), LTD.**, Staines Rd., Hounslow Ht., Middx. (Hounslow 6222/3.)

**GABRIEL, C. LTD.**, Palmers Lane, Enfield, Middx. (Tel.: Howard 4351/2/3.) White and grey sand and shingles supplied and delivered.

**GRUNDON, S. LTD.**, 79, Harlington Road, Hillingdon, Middlesex. (Tel.: Uxbridge 4156.) Sand, ballast, shingle, hardcore, ashes, excavation and demolition.

**HALL AND CO., LTD.**, Chantrey House, Ecclesall Street, S.W.1 (Tel.: Sloane 7122), and at East Dulwich. Pits: Pit: Bedfont, near Bedfont, near Bromley. Gravel aggregates, concreting, plastering and building sand.

**LONDON BALLAST CO., LTD.**, 55A Porchester Terrace, North Paddington, N.W.2.

**REALD, P. LTD.**, 100, Old Bond Street, Green E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Edmonton Gravel Pit, Montague Road, N.9. (Tel.: Shoreditch 9128/9.) and Fairlop Airfield, Forest Road, Ilford (Tel.: Hainault 6111/2).

# CONTRACTORS' GUIDE TO AGGREGATES

## MIDDLESEX

**STUART MACEY LTD.**, Gordon Road, High Wycombe. (Tel.: High Wycombe 2591/7.)  
**THAMES SAND AND GRAVEL CO. LTD.**, Fordbridge Road, Shepperton. (Tel.: Walton-on-Thames 23616.) Gravel aggregates, concreting, plastering and building sand.

**WRAYSBURY SAND AND GRAVEL CO. LTD.**, Pits at Wraysbury. (Tel.: Wraysbury 164.) Gravel aggregates, concreting, plastering and building sand.

## MID-WALES

**BENGRY AND SONS LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)  
**HARPER AND THOMAS LTD.**, Bayston Hill Quarry, Presteigne. (See Shropshire for details.)  
**NASH ROCKS STONE AND LIME CO. LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**OLD RADNOR TRADING CO. LTD.**, Quarries in Radnorshire. (Kingston 11.) (See Herefordshire.)  
**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington (Tel. 961). Salop.  
**TERN HILL SAND AND GRAVEL CO. LTD.**, Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

## MONMOUTHSHIRE

**IN-SITU CONCRETE LTD.**, Victoria Works, Ebbw Vale (Tel. 3032), and Phoenix Works, Cardiff (Cardiff 63311). For limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., and road paving.

**MONMOUTHSHIRE ASSOCIATED QUARRIES LTD.**, Head Office: 38 Chepstow Road, Newport, Mon. (Tel.: Newport 58311/2.) Suppliers of all grades of concrete aggregates, road metal, pitching stone, tarmacadam and bituminous macadam in limestone, dolomite and blue pennant stone. Quarries throughout the county.

**WHITECLIFF QUARRIES AND BRICKWORKS LTD.**, Coleford, Glos. (Tel. 3158/9.) (See Gloucestershire.)

## MONTGOMERYSHIRE

**HARPER AND THOMAS LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)  
**NASH ROCKS STONE AND LIME CO. LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington (Tel. 961). Salop.

## NORFOLK

**BARDON HILL QUARRIES (ELLIS AND EVERARD) LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**FRECKNEGAN GRAVEL CO. LTD.**, The Brook, Great Elm, Wiltshire. (Tel.: Sutton 391/2.) Washed sand and gravel. Pits: Feltwell. All sizes.

**JOHNSON, P. C. H. LTD.**, Station Road, Terrington St. Clement, near King's Lynn. (Tel.: Terrington St. Clement 248.) Washed and screened gravel, washed sand, washed sharp and fine sands.

**NETTERTON STONE QUARRIES LTD.**, Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamsted 1208/9.) Pits at Netterton. Concrete aggregates, building sand.

**THORPE GRAVEL PITS LTD.**, Harvey Lane, Norwich. (Tel.: Norwich 332434.) Washed and graded aggregates, stone and gravel delivered to all parts of Norfolk and Suffolk.

## NORTHAMPTONSHIRE

**AMEY'S AGGREGATES LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421-10 lines.) Pits near Abingdon. (Tel.: Abingdon 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

**BARDON HILL QUARRIES (ELLIS AND EVERARD) LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**BICESTER STONE CO. LTD.**, Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone and tarmacadam, dry, pitching stone, hardcore, etc.

**BILLING GRAVEL CO. LTD.**, Station Road, Billing, Northampton. (Tel.: Cogehoe 18.) Billing (Tel.: 23 Berkeley Square, W.1. (Tel.: Mayfair 6341.)  
**RAYBROOK, E. W. LTD.**, Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S.S., building sand, hardcore.

**DOWN-MAC PROPS LTD.**, Tallington, Stamford. All sizes of washed sand and gravel. (Tel.: Market Deeping 2301.)

**DUSTON STONE QUARRIES LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) Producers of building and walling stone, roughcast, hard, broken stone, ashes, sand, gravel and hoggin. Immediate delivery throughout Northamptonshire.

**FERRERSAND AGGREGATES LTD.**, Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all types of high-quality concrete aggregate to B.S.S. Delivers throughout Northamptonshire and adjoining counties.

**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)

**KETTON STONE CO.** (Prop. Andrew's Garage), Ketton, Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

**MACKANESS, A. J. LTD.**, Ransome Road, Northampton. (Tel.: Northampton 589.) Producers of all grades of washed aggregates. Building sand. Mixmortar (lime/sand mortar). Prompt deliveries.

**NEWARK (PETERBOROUGH) SAND AND GRAVEL CO. LTD.**, 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and graded gravel and sand.

**PETERBOROUGH QUARRIES LTD.**, Sandlands, Maxey, Peterborough. (Tel.: Market Deeping 2355.) Eight quarries supplying all grades of hardcore and broken stone. Also Wetmix at Yarwell, Wansford. All grades gravel and sand at Maxey.

## NORTHAMPTONSHIRE

**POLLARD, C. AND SON (TALLINGTON) LTD.**, Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)  
**STOKE ON TRENT LTD.**, Stoke-on-Trent Road, Northampton. (Tel.: Northampton 3358.) Producers of washed gravel and sand to B.S.S.

**WELFORD GRAVELS LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producers of all grades of washed aggregates in Northamptonshire and Bedfordshire. Regular deliveries anywhere. Local office and pits: Forty Ford. (Tel.: Welford 256.)

## NORTH WALES

**CAWOOD, WHARTON AND CO. LTD.**, Pistyll Gwyn Quarry, Llanarmon-y-Mold. (Tel.: Llanarmon-y-Mold 17.) Crushed limestone and tarred macadam, all sizes.

**CHESTERFIELD AND NORTH WALES TARRED MACADAM CO. LTD.**, Llanarmon, near Mold. (Tel.: Llanarmon-y-Yate 43.) Hard, broken limestone, dry and coated to B.S.S. Inquiries to Registered Office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 88094.)

**ESTON BROS.**, Llwyn Ifaf Quarry, Clynnog Fawr, Caernarvon. (Tel.: Clynnog Fawr 297/8.) All sizes washed and graded natural sand and gravel. Highest quality. Precast concrete products, ex our Griffiths Crossing Factory, Caernarvon. (Tel.: Caernarvon 2535/6.) Crushed granite ex our quarry, Pengwern and Gwydr Quarries Ltd., Treffriw, Llanrwst, Denbighshire. (Llanrwst 38.)

**PENMAENMAWR AND WELSH GRANITE CO. LTD.**, Quarries at Penmaenmawr (Tel.: 2355-6) and Treorcy (Tel.: Clynnog Fawr 23.) Caernarvonshire. All sizes and gradings of crushed granite aggregate. Any quantity per day; immediate delivery ex stock. Coated granite also available.

**RUTHIN AND DENBIGH TARMACADAM CO. LTD.**, Denbigh. (Tel.: Denbigh 75.) Lime, limestone, carboniferous lime, tarmacadam, etc. Also inquiries to Lunt Bros. Ltd., 28 Grosvenor Row, Birmingham. (Tel.: Central 7406-4 lines), and Lunt Bros. Ltd., Stourbridge (Tel.: 2001-6 lines).

**TERN HILL SAND AND GRAVEL CO. LTD.**, Almington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

## NOTTINGHAMSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD) LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**GLEN QUARRIES LTD.**, Central Chambers, Wellegate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concreting sand, building sand, plastering sand and crushed gravel; could be called for extensive supplies of limestone.

**GUNTHORPE GRAVELS (1959) LTD.**, (Tel.: Nottingham 77357; and Works: Lowdham 2131.) (An associate company of T. C. Campbell, Ltd.) All grades washed gravel and sand to B.S.S.

**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) Pits at Hoveringham House, Pierrepont, Colwick, Bleetham and Newark. All grades of washed gravel and sand to any specification. Crushed quartzite for surface dressing of roads; a speciality. Plant capacity, 8,000 tons per day.

**NEWARK GRAVEL AND CONCRETE CO. LTD.**, Grove Street, New Bolderton, Newark, Notts. (Tel.: Newark 401.) All grades washed sand and aggregates.

**NORTH NOTTS. GRAVEL CO. LTD.**, Bellmoor, Retford, Notts. (See Yorkshire.)

**PRESTWICH, WILLIAM AND SONS LTD.**, Dronfield, Derbyshire. (Tel.: 226-6 lines.) Dry and coated Derbyshire limestone and slate for all purposes and to all specifications. 'Haddon' foamed slag blocks.

**SALISBURY AND WOOD LTD.**, Matlock. (Tel.: 272/273.) (For details, see Derbyshire.)

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**AMEY'S AGGREGATES LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421-10 lines.) Pits near Abingdon. (Tel.: Abingdon 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

**BARDON HILL QUARRIES (ELLIS AND EVERARD) LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**BICESTER STONE CO. LTD.**, Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone and tarmacadam, dry, pitching stone, hardcore, etc.

**BILLING GRAVEL CO. LTD.**, Station Road, Billing, Northampton. (Tel.: Cogehoe 18.) Billing (Tel.: 23 Berkeley Square, W.1. (Tel.: Mayfair 6341.)  
**RAYBROOK, E. W. LTD.**, Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S.S., building sand, hardcore.

**DOWN-MAC PROPS LTD.**, Tallington, Stamford. All sizes of washed sand and gravel. (Tel.: Market Deeping 2301.)

**DUSTON STONE QUARRIES LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) Producers of building and walling stone, roughcast, hard, broken stone, ashes, sand, gravel and hoggin. Immediate delivery throughout Northamptonshire.

**FERRERSAND AGGREGATES LTD.**, Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all types of high-quality concrete aggregate to B.S.S. Delivers throughout Northamptonshire and adjoining counties.

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**KETTON STONE CO.** (Prop. Andrew's Garage), Ketton, Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

**MACKANESS, A. J. LTD.**, Ransome Road, Northampton. (Tel.: Northampton 589.) Producers of all grades of washed aggregates. Building sand. Mixmortar (lime/sand mortar). Prompt deliveries.

**NEWARK (PETERBOROUGH) SAND AND GRAVEL CO. LTD.**, 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and graded gravel and sand.

**PETERBOROUGH QUARRIES LTD.**, Sandlands, Maxey, Peterborough. (Tel.: Market Deeping 2355.) Eight quarries supplying all grades of hardcore and broken stone. Also Wetmix at Yarwell, Wansford. All grades gravel and sand at Maxey.

## RADNORSHIRE

**OLD RADNOR TRADING CO. LTD.**, Quarries in Radnorshire. (Tel.: Kinington 11.) (See Herefordshire.)

**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington (Tel. 961). Salop.

## RUTLAND

**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171-15 lines.) (For details, see Nottinghamshire.)

**KETTON STONE CO.** (Prop.: Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

**PETERBOROUGH QUARRIES LTD.**, Sandlands, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

**POLLARD, C. AND SON (TALLINGTON) LTD.**, Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

## SCOTLAND

**KEIR AND CAWDER LTD.**, Kirkintilloch Road, Bishopbriggs. (Tel.: Bishopbriggs 3200.) All grades washed sand and gravel aggregates.

## SHROPSHIRE

**BALLIDON QUARRIES LTD.**, Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated and uncoated to B.S.S. 8621 and wet-mix, large output; reliable deliveries.

**BENGRY AND SONS LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

**DUNNING AND SON LTD.**, Haughmond Quarry, near Shrewsbury. (Tel.: Upton Magna 286/7.) All grades of high-quality roadstone, concrete aggregates and coated macadam. All to B.S.S. Any tonnage available for immediate delivery.

**HARPER AND THOMAS LTD.**, Bayston Hill Quarry, Shrewsbury. (Tel.: Bayston Hill 551.) High-quality roadstone, chippings, concrete aggregates, hardcore and coated macadam. Large tonnages always available.

**NASH ROCKS STONE AND LIME CO. LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

**OLD RADNOR TRADING CO. LTD.**, Kingston. (Tel.: 11.) (See Herefordshire.)

**SALOP SAND AND GRAVEL SUPPLY CO. LTD.**, Admaston, Wellington (Tel. 961). Salop.

**TERN HILL SANDS AND GRAVEL CO. LTD.**, Almington Quarries, near Market Drayton, Staffs. (Tel.: Hale 261/2/3.) (See Staffordshire for details.)

**TRENTHAM GRAVEL CO. LTD.**, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice-washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.

## SOMERSET

**ASHAM QUARRY CO. LTD.**, Chantry, Frome. (Tel.: Nunney 351.) All sizes limestone block, broken and aggregates. Tarred and bituminous macadam to B.S. Ex quarry and delivered.

**DANGERFIELD, F. J. AND CO. LTD.**, 216A Finchley Road, London, N.W.3. (Tel.: HAMPstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)

**GILSON, S. C. AND SONS LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Hill 243.)

**HAL AND CO. LTD.**, Llancomair House, Ashton Vale Road, Bristol, 3. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.

**ROADS RECONSTRUCTION (1954) LTD.**, Stoneleigh House, Frome. (Tel.: Frome 2361.) All sizes broken limestone, dry and coated, to British Standards. Precast concrete products.

**WAINWRIGHT, JOHN, AND CO. LTD.**, Shepton Mallet. (Tel.: Shepton Mallet 2366/7.) All sizes basalt, coated basalt, concrete aggregates, filtering media, building blocks and slabs.

## SOUTH SCOTLAND

**ESK MANUFACTURING CO. LTD.**, Carlisle. (Tel.: Carlisle 2-4941.) (For details see Cumberland.)

## SOUTH WALES

**IN-SITU CONCRETE LTD.**, Victoria Works, Ebbw Vale (Tel. 3032), and Phoenix Works, Cardiff (Cardiff 63311). For limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.

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**SOUTH WALES SAND AND GRAVEL CO. LTD.**, Head Office: P.O. Box 8, Beaumaris Buildings, Swansea. (Tel.: Swansea 5307.) Sand and gravel merchants, builders' merchants, Plannant Quarry owners, slag, hardcore, ash, filling, graded clinker, filter media. Depots: Cardiff, Newport, Barry, Port Talbot, Briton Ferry, Swansea, Llanelli.

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**BALLIDON QUARRIES LTD.**, Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated and uncoated to B.S.S. 8621 and wet-mix, large output; reliable deliveries.

**BARDON HILL QUARRIES (ELLIS AND EVERARD) LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

**CROXDEN GRAVEL LTD.**, Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.

# CONTRACTORS' GUIDE TO AGGREGATES

## STAFFORDSHIRE

DUNNING AND SON, LTD., Wood End Gravel Pits, Hedgesford. (Tel.: Hedgesford 302/325.) Washed sand and gravel. All to B.S.S. High-quality roadstone, concrete aggregates and coated macadam from mineral limestone Quarry, near Shrewsbury. (See Shropshire.)  
**GRAVEL HILL SAND QUARRIES, LTD.** Tel.: Ashby (Leics.) 79. (See Leicestershire for details.)  
**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)  
**HILTON GRAVEL, LTD.**, Cheadle, Staffs. (Tel.: Team 241.) Also at Longton, Stoke-on-Trent (Tel.: Longton 32196) and Stretton, Burton-on-Trent. (Tel.: Burton 6061.)  
**HULLAND GRAVEL CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)  
**PRESTWICH, WILLIAM, AND SONS, LTD.**, Dronfield, Derbyshire. (Tel. 2204—6 lines.) Dry and coated Derbyshire limestone and slag for all purposes and to all specifications. "Haddon" foamed slag blocks.  
**RUGELEY GRAVEL, LTD.**, Rugeley Quarries, Rugeley, Staffs. (Tel.: Rugeley 251/2.) Entirely modern plant. Sand classifiers. Finest aggregates to B.S.S. Large output.  
**SALISBURY AND WOOD, LTD.**, Matlock. (Tel. 272/273.) (For details, see Derbyshire.)  
**SHIRE OAK GRAVELS, LTD.**, Lichfield Road, Walsall Wood, Staffs. Washed crushed gravel and washed sand. (Tel.: Brownhills 3253.)  
**TERPS HILL SAND AND GRAVEL CO., LTD.**, Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Pit sand, concrete sand, and all grades of washed crushed gravel. Hardcore, cinders, ashes and hoggin.  
**TRENTHAM GRAVEL CO., LTD.**, Lordsley Quarries, Willoughby, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity 2,000 tons per day.  
**WINDMILL SAND AND GRAVEL QUARRIES, LTD.**, Cannock Road, Wolverhampton. (Tel. 31108.) Concrete aggregates, plastering, building and asphalt sand. All to B.S.S.

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**ALRESFORD SAND AND BALLAST CO., LTD.**, Alresford Creek, near Chichester, Essex. (Tel.: Wivenhoe 341.) Suffolk area pits at Bures and Stoke-by-Nayland. All grades washed aggregate sand, also hoggin.  
**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, Bardon Hill. (Tel.: Calvington 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)  
**DARBY'S SAND AND GRAVEL CO., LTD.**, Pit at Chippenham, Camb. (See Camb.)  
**DICKERSON, M., LTD.**, Teverham Corner, Newmarket Road, Cambridge. (Tel. 56973/4.) (See Camb.)  
**FRECKENHAM GRAVEL CO., LTD.**, Pit at Freckenham. (See Camb.)  
**HALL AND CO., LTD.**, West End Road, Ipswich. (Tel.: Ipswich 551/4/5.) Pits at Kesgrave and Homersfield, near Ipswich. Gravel aggregates, concreting, plastering and building sand.  
**MACLAREN BROS. (KENNETT), LTD.**, Station Road, Kennett, Camb. (Kentford 333/4.) (See Camb.)  
**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)  
**TORPE GRAVEL PITS, LTD.**, Harvey Lane, Norwich. (Tel.: Norwich 33243/4.) (See Norfolk.)  
**WEBB, G., CAMBRIDGE**, 35 Magrath Avenue, Cambridge. (Tel. 3969/4353, 59966.) (See Camb.)

## SURREY

**COFF, HARRY A., LTD.**, Buckhurst Hill, Chesham, Ascot, Berks. (Tel. 1026/7.) (See Berkshire.)  
**DANGERFIELD, F. J., AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: Hampstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**GILSON, S. C., AND SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)  
**HALL AND CO., LTD.**, 16 Chapel Road, Walsall. (Tel.: Walsall 7840.) Other main depots at Billingsgate, Bogger, Crownhill, Chelmsford, Eastbourne, Horsham, Hove and Seaford. Pits at Washington, Crumblies, near Eastbourne, Chichester, Rye Harbour, Midhurst, Shoreham and Portslade. Gravel aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.  
**HARRIS, M. P., AND CO., LTD.**, West Station Goods Yard, Bedminster. 61/2 miles from Bristol, near Avonmouth. (Tel.: 3800.) Dominion Road, Worthing (Tel.: 8822); Whitbread Lane, Northiam (Tel.: 2211); Station Goods Yard, Haywards Heath (Tel.: 1750); Crawley Road, Horsham (Tel.: 3366). The Hornet, Chichester. All grades aggregate, hardcore, cinders, chalk, ash, etc.  
**WRIGHT, C., AND SONS (BTTON), LTD.**, 19 Bristol Gardens, Brighton. (Tel.: Brighton 63357 and 62406.) All-in ballast, washed and crushed shingle, sand, ashes, hardcore, chalk, bricks, etc.

## SURREY

**JANES AND CO., LTD.**, 2C Buckingham Avenue, Slough. Sand, aggregates, hardcore, ashes, bulldozing & bulk excavation. (Tel.: Slough 2036/2/3.)  
**LONDON BALLAST CO., LTD.**, (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.  
**MARCO (AGGREGATES), LTD.**, Pit: Norland Lane, Thorpe near Egham. (Tel.: Chertsey 3401.) Producers and distributors of high-grade washed sand, shingle, ballast, etc.  
**MARCO (CROYDON), LTD.**, Hampton Road, West Croydon. (Tel.: THORnton Heath 4236/7/8.) All building and road aggregates.  
**WELLS, A. L., AND SON, LTD.**, Builders' Merchants, Garlands Road, Leatherhead. (Tel.: 3018/9.) Sand and gravel, hardcore, ashes, cement. Clinker block manufacturers.  
**WINTON WM. R., LTD.**, Send, Woking. (Tel.: Ripley 2454/5.) All grades sand, shingle, ballast, hoggin and ashes. Clinker block manufacturers.

## SUSSEX

**AVANN, F.**, Cavendish Avenue, Eastbourne. (Tel. 4969/70.) Washed and graded ballast, sand, bricks, breeze and concrete blocks, hardcore, clinker, tarmac, etc., supphes.  
**GILSON, S. C., AND SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)  
**HALL AND CO., LTD.**, 16 Chapel Road, Walsall. (Tel.: Walsall 7840.) Other main depots at Billingsgate, Bogger, Crownhill, Chelmsford, Eastbourne, Horsham, Hove and Seaford. Pits at Washington, Crumblies, near Eastbourne, Chichester, Rye Harbour, Midhurst, Shoreham and Portslade. Gravel aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.  
**HARRIS, M. P., AND CO., LTD.**, West Station Goods Yard, Bedminster. 61/2 miles from Bristol, near Avonmouth. (Tel.: 3800.) Dominion Road, Worthing (Tel.: 8822); Whitbread Lane, Northiam (Tel.: 2211); Station Goods Yard, Haywards Heath (Tel.: 1750); Crawley Road, Horsham (Tel.: 3366). The Hornet, Chichester. All grades aggregate, hardcore, cinders, chalk, ash, etc.  
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## WARWICKSHIRE

**BALLIDON QUARRIES, LTD.**, Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output reliable deliveries.  
**BRUNTINGTHORPE GRAVELS, LTD.**, Gilmerton, near Rugby. (Tel.: Lutterworth 46.) All sizes gravel aggregates, building and concrete sand to B.S.S., scientifically balanced ballast.  
**DUSTON STONE QUARRIES, LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)  
**HALL AND CO., LTD.**, 188 Lichfield Road, Four Oaks, Sutton Coldfield. (Tel.: Four Oaks 356.) Gravel aggregates, concreting, plastering, building sand.  
**JUDKINS LTD.**, Granite Quarries, Tuttle Hill, Cannock. (Tel.: Nuneaton 34—10 lines.) All sizes washed granite aggregate, tanned and bituminous macadam. Slab mix a speciality.  
**SHIRE OAK GRAVELS, LTD.** (See Staffordshire.)  
**WELFORDE GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel. 4587/8/9.) (See Bedfordshire and Northamptonshire.)

## WESTMORLAND

**BROOMBYS, LTD.**, Sandside, Milnthorpe, Westmorland. (Tel.: Milnthorpe 3251/2.) All grades washed gravel, sand, limestone, granite chippings, pitching, tarmacadam, roaster stone, etc.  
**ESK MANUFACTURING CO., LTD.**, Carlisle. (Tel.: Carlisle 2-941.) (For details, see Cumberland.)

## WILTSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtney, near Abingdon. (Tel.: Sutton Courtney 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxford. (Tel.: Clifton Hampden 236.) Billing, Northampton (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

## WILTSHIRE

**BULL BROS. S. AND L., LTD.**, 126A High Street, Winchester. (Tel. 2264.) (See Hampshire.)  
**CORK T. (CHELTENHAM), LTD.**, Gloucester Road, Cheltenham. (Tel.: 717/4874.) (See Glos.)  
**DANGERFIELD, F. J., AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: Hampstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**FLOYD AGAR AND CO., LTD.**, Sherston, Malmesbury, Wilts. (Tel.: Sherston 237.) Finest quality Cotswold building stone and walling stone for sale, also hardcore and quarry waste for road making. Delivered or ex quarry at keen prices.

**GILSON, S. C. AND SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

**MOREYS (VERWOOD), LTD.**, Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggin, path gravel.  
**POOLE (LECHLADE), LTD.**, Gravel Pit, Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)

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**BENGRY AND SONS, LTD.**, Llanymoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

**DUNNING AND SON, LTD.** (See Shropshire.)

**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)

**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)

**OLD RADNOR TRADING CO., LTD.**, Kington. (Tel. 11.) (See Herefordshire.)

## YORKSHIRE

**BRAITHWAITE, A., AND CO., LTD.**, Coningham Hall, Knaresborough. (Tel.: Knaresborough 2286.) Quarries at Knaresborough (Tel.: Knares 2286) and Catterick (Tel.: Old Catt. 157.) Washed, crushed and graded concrete aggregates to B.S. Specification. Output 2,000 tons daily. Ready-mixed mortar and concrete also available.

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**GLEN QUARRIES, LTD.**, Central Chambers, Welgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concreting sand, building sand, plastering sand and crushed gravel could be collected at quarry or delivered.

**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 11—15 lines.) (For details, see Nottinghamshire.)

**NORTH NOTTS. GRAVEL CO., LTD.**, Bellmoor, Retford, Notts. (Tel.: Retford 2219—3 lines.) Concrete aggregates and sands, quartzite chippings, building sands. Quarries at Bellmoor and Lound near Retford and Worksop. Truck-mixed concrete plants at Retford, Notts., Ossett, Yorks., and Wath-on-Dearne, Yorks.

**PRESTWICH, WILLIAM AND SONS, LTD.**, Dronfield, Derbyshire. (Tel.: 2204—6 lines.) Dry and coated Derbyshire limestone and slag for all purposes and to all specifications. "Haddon" foamed slag blocks.

**SALISBURY AND WOOD, LTD.**, Matlock. (Tel.: 272/273.) (For details, see Derbyshire.)

**STANLEY FERRY GRAVEL CO., LTD.**, Norwich Union Building, City Square, Leeds, 1. (Tel.: Leeds 23561.) Washed, crushed and natural graded sand and gravel. Supplied to specification, large daily production. Centre of Yorks. West Riding market. Pit: Wakefield.

**WELBECK SAND AND GRAVEL CO.**, Parkhill, Wakefield. (Wakefield 4454.) Washed sand and gravel.

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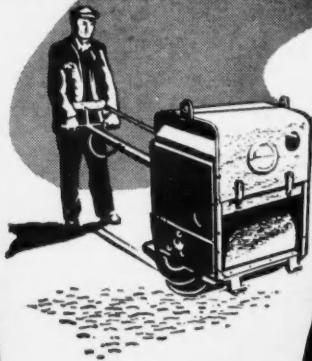
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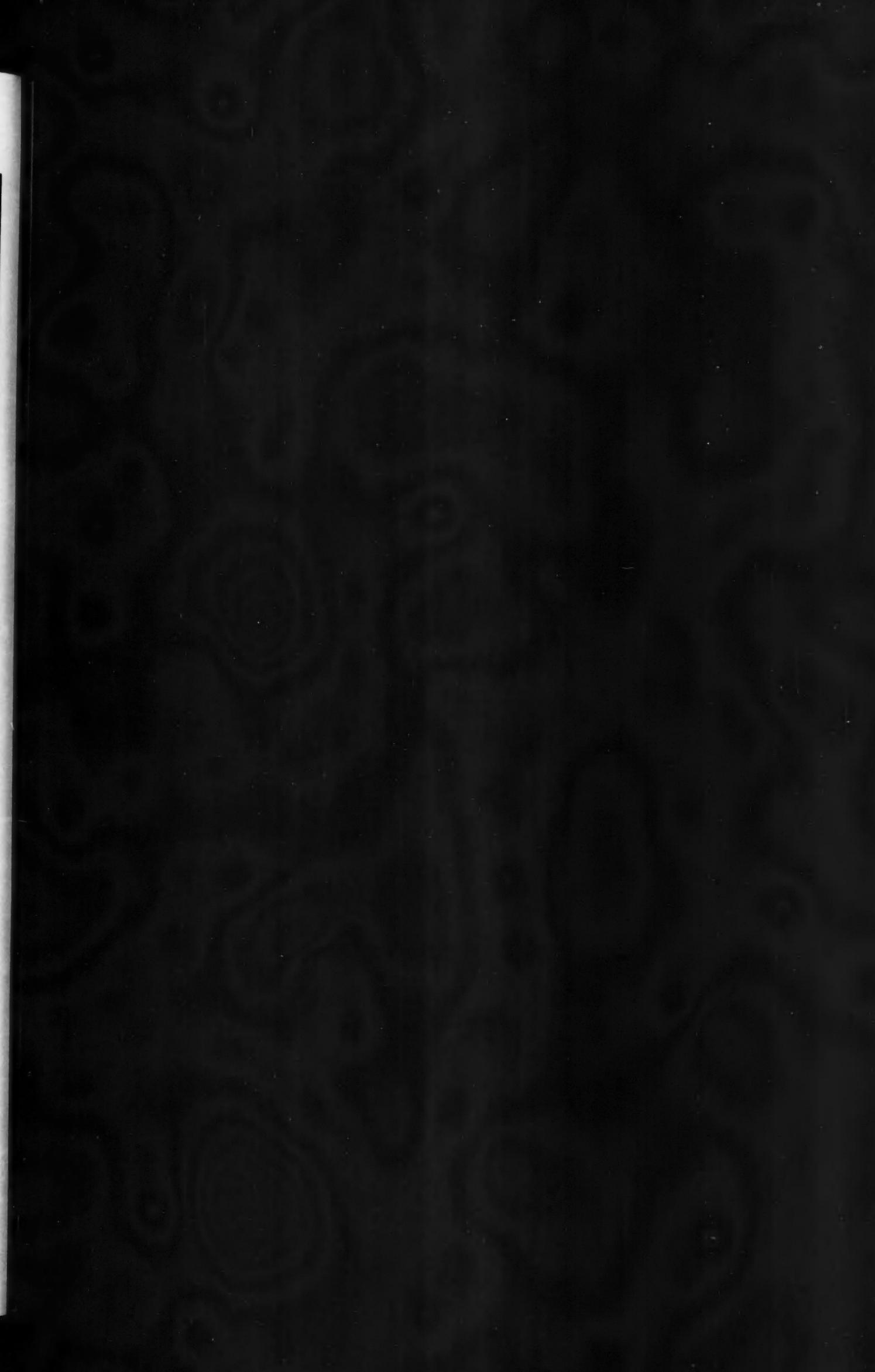


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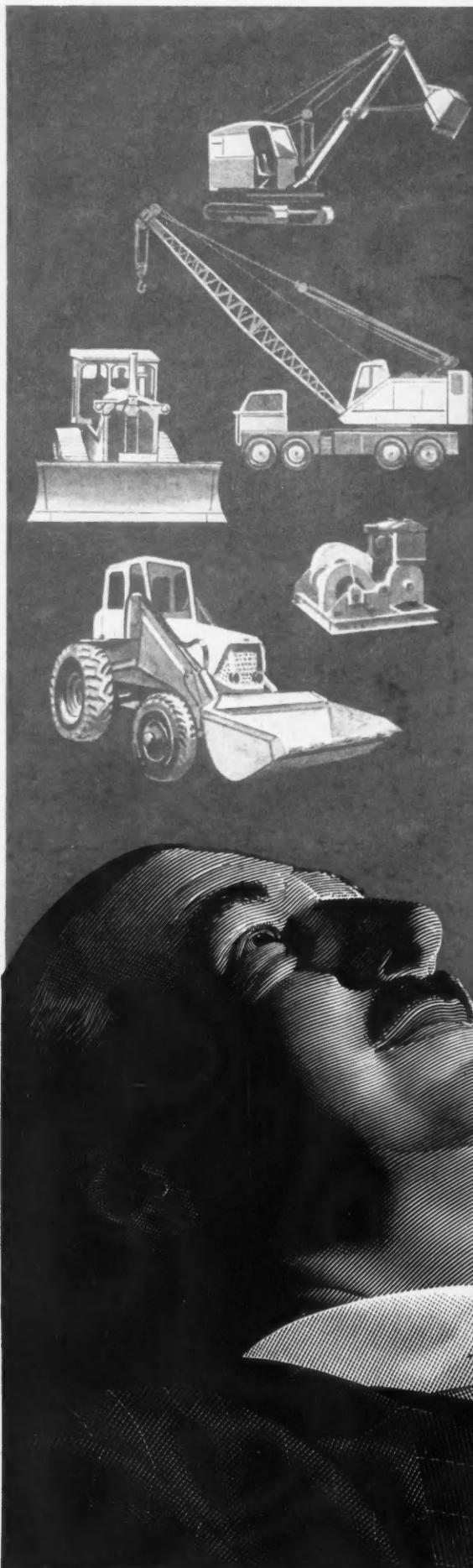
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